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ABSTRACT

Intended for educators and program planners, this guide provides program information and planning ideas for maximizing opportunities to increase the basic skills of undereducated children, youth, and adults. It is suitable for use by those with or without expertise in the basic skills areas of reading, math, writing, and oral communication. Organized around issues, concerns, and questions raised by those working with educationally disadvantaged persons, the handbook contains selected articles, newsletters, papers, and other writings. The handbook focuses on basic skills improvement: a statement of the problem, defining basic skills and standards for basic skills programs, program planning, characteristics of improvement programs that work, coordinating basic skills improvement efforts, program evaluation, improving basic skills in the classroom, microcomputers and basic skills instruction, and basic skills improvement. A final section on selected basic skills improvement programs contains references representing two categories: those that describe selected basic skills improvement programs and those for use in planning and operating basic skills improvement programs. (YLB)

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BASIC SKILLS IMPROVEMENT

A Handbook for Reading, Math, Writing, and Oral Communication

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PREFACE

Improving the reading, mathematical, and communication skills of undereducated children, youth, and adults is a state and national issue. Educators, students, parents, and employers have all expressed concerns regarding ability levels within these skills. And as technology advances, these skill areas will become even more "basic" to surviving in and contributing to society.

In looking toward better serving educationally disadvantaged youth and adults, the Wisconsin Governor's Employment and Training Office contracted with The Vocational Studies Center (University of Wisconsin-Madison) to study basic skills improvement efforts. The study has provided current information on many aspects of planning and implementing basic skills improvement programs. Current services throughout the nation focus on a range of participants (including in-school youth, out-of-school youth, and adults) and are being operated by many service providers including elementary and secondary educational institutions, community agencies, post-secondary educational institutions, and colleges and universities.

Program and other information reviewed indicate there is not one simple or hard fast approach for basic skills improvement programs. A variety of materials and methodologies appear to be effective in given situations. We believe that "good" programs can fall anywhere on a continuum from holistic to specific skills and that, given the appropriate design and context, they can be made to work for children, youth, and adults.

This handbook is intended to provide educators and program planners with program information and planning ideas for maximizing opportunities to increase the basic skills of undereducated children, youth, and adults. It is a planning guide that has been organized around issues, concerns, and questions raised by administrators, program planners, and educators and is designed for use by those with or without expertise in the basic skills areas of reading, math, writing, and oral communication.

Barbara Dougherty
Jan Novak

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USING THE HANDBOOK

USING THE HANDBOOK

Helping children, youth, and adults improve their basic skills--that is the purpose of this handbook. It has been designed to help the administrator, teacher, and program planner develop, modify, and implement *basic skills improvement programs*. The Handbook is a planning guide that can be used by those with or without expertise in the basic skills areas of reading, math, writing, and oral communication.

WHAT DO WE MEAN BY BASIC SKILLS?

Argument can be made for including a variety of skills under the umbrella term "basic skills." Many disciplines can be considered basic to one's education and essential to one's survival in today's society. For this handbook, however, four skill areas were selected to form the base for its content and design. Those four areas are reading, mathematics, writing, and oral communication. In addition to following the guidelines established by Congress regarding basic skills, this selection also addressed the fact that these skills are fundamental to almost all learning, regardless of the specific content or subject matter of that learning. Reading, mathematics, writing, and oral communication are found in nearly all of our daily activities--looking in the paper for the score of last night's big game, reading a recipe, buying groceries, or riding the bus or subway. No matter what we do, we can't get away from using and needing these four "basic skills." Competency in reading, math, and communication also provides one with the skills for increasing ability and knowledge in all other disciplines.

FOCUS ON BASIC SKILLS IMPROVEMENT

Persons with "adequate" skill levels in reading, math, writing, and oral communication usually don't think about how often they rely on these "competencies." Even if we don't like making calls or answering phones in the office, we can find phone numbers in the telephone directory, write down messages, read messages, talk with the person on the other end of the phone--and figure out the monthly telephone bill. But many individuals can't perform these or other similar tasks--and helping these individuals improve their skills to the levels they need is the purpose of this handbook. Basic Skills Improvement: A Handbook for Reading, Math, Writing, and Oral Communication is designed to assist persons planning programs to help educationally disadvantaged children, youth, and adults build their basic skills and develop them to the level they need to survive *and* succeed in school, on the job, and in the community.

A great amount of research, literature, and resources is available on teaching reading, math, writing, and oral communication. Recently, many resources on basic skills *improvement* have been added to this wealth of information through the Basic Skills Improvement Program (U.S. Department of Education). Materials within the Handbook have been drawn from both basic skills education and basic skills improvement programming. The emphasis, however, is on *improving to meaningful and needed levels* the skills of the educationally disadvantaged.

ORGANIZATION OF THE HANDBOOK

Resources selected for inclusion in the Handbook address specific concerns expressed to us by administrators, program planners, and other educators working with educationally disadvantaged persons. While many individuals wanted information on how to plan a basic skills improvement program, others asked if "standards" had been established to help determine what skills to teach. Still others wanted to know how students' basic skills could be improved within the regular classroom or content area. Thus, questions such as these provided the structure for identifying and selecting materials for the Handbook.

Organized around issues, concerns, and questions raised by administrators, program planners, and educators, the Handbook contains selected articles, newsletters, papers, and other writings that focus upon the following:

- BASIC SKILLS IMPROVEMENT: A STATEMENT OF THE PROBLEM
- DEFINING BASIC SKILLS AND STANDARDS FOR BASIC SKILLS PROGRAMS
- PROGRAM PLANNING
- CHARACTERISTICS OF IMPROVEMENT PROGRAMS THAT WORK
- COORDINATING BASIC SKILLS IMPROVEMENT EFFORTS
- PROGRAM EVALUATION
- IMPROVING BASIC SKILLS IN THE CLASSROOM
- MICROCOMPUTERS AND BASIC SKILLS INSTRUCTION
- BASIC SKILLS IMPROVEMENT: TOPICS OF INTEREST
- SELECTED BASIC SKILLS IMPROVEMENT PROGRAMS

ADDITIONAL RESOURCES

Numerous resources are available that address basic skills education and/or basic skills improvement. Many valuable resources are cited throughout the Handbook. In addition, three publications describing specific programs operated by schools, community agencies, and other educational service providers are available through the Vocational Studies Center (VSC). These materials provide program descriptions, planning information, and classroom resources that can be used by persons planning and implementing basic skills improvement programs in their schools and communities. The publications available through the VSC are:

> IMPROVING BASIC SKILLS: VOLUME I - A COLLECTION OF WISCONSIN PROGRAMS FOR IMPROVING THE BASIC SKILLS OF UNDEREDUCATED YOUTH AND ADULTS (Provides over 300 descriptions of basic skills programs in Wisconsin's K-12 schools, community organizations, correctional institutions, vocational education system, and colleges and universities.)

IMPROVING BASIC SKILLS: VOLUME II - A COLLECTION OF NATIONAL PROGRAMS AND RESOURCES FOR IMPROVING THE BASIC SKILLS OF UNDEREDUCATED YOUTH AND ADULTS (Describes 26 programs selected from the National Diffusion Network--includes hands-on materials from programs. Also describes national organizations and local programs working to combat functional illiteracy.)

IMPROVING BASIC SKILLS: VOLUME III - A COLLECTION OF PROGRAMS AND RESOURCES SELECTED FOR THE GOVERNOR'S CONFERENCE ON BASIC SKILLS, DECEMBER 1981 (Describes 52 Wisconsin programs selected by a Governor's Committee as being effective--includes classroom resources and materials used with programs.)

If your plan is for one year,
plant rice;

For ten years,
plant trees;

For a hundred years,
educate men.

(An ancient Oriental proverb
written by Kuan-Tze about
390 B.C.)

BASIC SKILLS IMPROVEMENT: A STATEMENT OF THE PROBLEM

Excerpts from Basic Skills Improvement Program--Management/Evaluation Design

Shirley A. Jackson, Director

Basic Skills Improvement Program
U.S. Department of Education
September 1980

The Problem and the Need

Over the past twenty years our society has seen incredible technological advances and has experienced further expansion of its complex economy, yet most of the assessments of the educational achievement of our young people and of the status of literacy among our adults show only that what advances there have been are modest. There are no simple explanations for this failure to markedly increase educational achievement; that failure reflects the dynamics of a whole society and the fundamental changes that this nation has experienced during this time. But certainly among the explanation must be a trend toward specialization and the accompanying impatience with a liberal or broad education which for many appear to have no practical or immediate uses; the inclusion in the secondary school program of millions more students who a decade ago would have "dropped out" of school, resulting in accommodations in the curriculum for these students; the competition of the media, particularly television which while it has a clear ability to "teach" does not seem to have the inclination to teach "reading, writing, and arithmetic."

The facts about literacy are disturbing, not as one would compare them to other nations, but as one would see them in the light of this nation's need for a literate, highly trained citizenry. We know, for example:

- that 13% of the 17-year old in school youth and 42% of the 17-year old in-school black urban youth are functionally illiterate;
- that 23 million adults in the U.S. cannot read the daily newspaper, fill out a job application or take a driver's license test;
- that SAT scores over the past 20 years have declined 27% across the board;
- that 15 million adults fall below the 8th grade educational level and another 37 million have completed the eighth grade but have not earned the high school diploma;

- that one out of every five college students cannot perform basic reading skills upon graduation.

The undereducation of our young and a generation of adults has become a national concern. Parents are now forming groups and associations to work with the schools in strengthening the curriculum. And industry, business, and labor are expressing their concerns about the quality of the products of the schools and colleges and are actively urging and supporting reforms.

The simple fact is that an individual cannot succeed in a highly technical society without at least the basic skills of reading, writing, speaking and computing. The number of non-technical jobs have decreased in the last two decades, and the number of white collar jobs has increased. Most of those who are unemployed do not have the elementary skills needed for the job available.

Excerpts from Basic Skills Improvement Program--Management/Evaluation Design

Shirley A. Jackson, Director

Basic Skills Improvement Program
U.S. Department of Education
September 1980

Basic Assumptions

Any Federal legislation as comprehensive and far reaching as the Basic Skills Improvement Program comes into being only after there is an evident public interest in the problem the legislation addresses and after a fairly lengthy, detailed public examination of the issues. The discussions which preceded this legislation made it clear that the new program was based on certain major assumptions:

- The complexity and highly specialized nature of American society makes it essential that each person develop competence in the basic skills, for without the competence he or she cannot succeed.
- Most individuals can learn basic skills regardless of previous socioeconomic and other possibly impeding conditions if the instruction is appropriate to the individual's needs, interests and level (The exception to this statement is the approximately 1% of the population considered uneducable.) Therefore, all individuals in a democratic society must be provided the opportunity for mastery of the basic skills.
- Major reforms must be introduced into the schools and into programs serving those outside of the schools so that the teaching and learning of basic skills are changed and improved.
- The changes and improvements being sought cannot be achieved by money alone but by a more organized and intelligent communication of the knowledge we already have of improving basic skills so that it becomes part of regular teaching practices.
- Any major reform must involve the coordination of the multiple resources being devoted to improving basic skills, particularly the various knowledges and practices of programs and agencies.
- All improvements in the basic skills must be based on a careful assessment of the needs of the citizens of the community and the resources that are available to meet those needs.

- The variation among States in their needs and in their understandings, expertise, and experience in dealing with those needs makes it important that no one strategy or plan be proposed--each State is unique and must address its problems from its own point in development and implementation.

Underlying Assumptions About Educational Strategies

The Basic Skills Program is not authorized to develop a single educational philosophy or educational strategy in bringing about basic reforms. These must come from the people and agencies who are most affected by the changes and reforms being proposed. But there are a number of educational strategies which the Department of Education has supported over the years and to which educators and laymen alike have supported. The language of the Basic Skills law itself and the legislative history on which it is based includes at least these propositions as underlying program strategies:

1. A proposed basic program cannot be an add-on, and it cannot be an effort to develop a basic skills program apart from the regular curriculum. The basic skills must not be taught in isolation from the rest of the program or by staff that works apart from their colleagues. The creative reforms being sought by the Basic Skills Program are of existing efforts.
2. Since it is understood that improvements in the basic skills cannot take place in isolation from the rest of the school program, it follows that they must be taught and learned throughout the school program, and consequently whatever reforms are to be introduced must involve the coordination of the total school program. Coordination requires no complex design; it is a matter of enabling people to work together on a common set of goals and objectives and to bring together their resources in meeting these goals and achieving those objectives.
3. The reforms must not be piecemeal, either in the educational practices and methods being proposed or in the groups being served. The whole school system or the whole school should be involved, and whole groups of students must be targeted.

4. Stereotyping exists in school programs as to race, sex, ethnic group, religion, language, economic status, handicap and age. The changes and improvements being sought must include the elimination of these.
5. Before an idea or practice can be successfully or meaningfully introduced into an educational program, it is obvious that it might have the backing of the leadership, not only within the school but from the larger community, including business, labor, industry, and parents. Such commitment is not easy to gain from such a wide spectrum of groups, but the extent of that commitment is a measure of the promise of the proposed reform.
6. The evidence is clear that students work more effectively in the schools when their parents know what their children are learning and when they have been able to participate in the development of the school's program. Schools have long known that the guidance and discipline parents give their children cannot be duplicated by institutions, but they still need to know how parental involvement can be strengthened and better utilized in order to improve student learning, particularly in areas as fundamental as the basic skills. Therefore, the use of parents--and other volunteers--in the planning of the program, in its implementation, and in weighing its effectiveness is a vital part of any proposed reform.
7. The changes being sought should be far reaching and fundamental. Such changes cannot easily be brought about. They require an understanding of the need which comes from thorough study involving many individuals and groups; they require careful planning based on that study; they require the definition of both short term and long term goals; and they require a systematic and periodic assessment of results.

Excerpts from The Unfinished Educational Agenda for the 80's

Shirley A. Jackson, Director

State and Local Education Programs
U.S. Department of Education

Speech given at the North Carolina Reading Association Meeting
Charlotte, North Carolina, March 1982

The quests for effective reading programs and too often the quests for panaceas have been going on for a long time. The fruition of the quest for a panacea has not been realized - there does not appear to be a magic approach or a magic pill that will cure all of our reading instructional needs. However, the fruition of the quests for effective reading and some of the other basic skills programs (mathematics and written communications) is just starting to be achieved in this country. The increased educational achievement of most of the students in this country can be documented by several pieces of evidence - despite press coverage to the contrary.

1. Achievement scores of elementary students have gone up across the nation, in every sector, even urban districts, but especially rising among primary level children. It is fairly safe to say, based on the evidence, that we have some very sound strategies for teaching beginning reading in this country.
2. The National Assessment of Education Progress Study - for 17 year in-school youth showed an average gain of more than 2 percentage points on basic reading items in comparisons between the 1971 and 1975 results.
3. The National Assessment of Education Progress (9-year olds) shows children have been improving on basics; reading, writing, and math, white children and black, North and South. The Assessment found the most striking gains among 9-year old black children in the Southeast. This is significant because that's where the Federal government has spent most of its education dollars - helping younger children from poor families in the early years of schoolings. This has also been the focus of Federal ESAA desegregation efforts.

4. State competence examinations in Michigan, Indiana, Florida to name a few, show marked improvement in achievement of youngsters on these tests despite the rocky road that these tests have followed.
5. Reading teachers are better prepared than ever before in our history.
6. We have better designed and more attractive instructional materials to work with than ever before.
7. We know more about teaching reading and designs for instructional effectiveness than ever before.
8. More students, Black and white, complete high school and college than ever before in the history of this country.

   - In 1900 about 6 percent of youth completed high school; now 80 percent of our youth complete high school and about half of those go on to further education. High school graduates of forty years ago were a select group; approximately 40 percent of their age group, compared to high school graduates now - about 80% of their age group. Obviously, the 40% most inclined to have difficulty in high school dropped out leaving a much more "select" group of high school students. Unfortunately, we still have a drop out problem among the poor.

9. Evidence from Army tests and Iowa tests lead us to believe that the general levels of literacy, knowledge, and skills of today's youth are higher than they were forty years ago. Although they are not as high as they need to be functional in our highly technological society.
10. Results of the American College Testing program in (A.C.T.) confirm that the long slide in the scores of students taking college preparatory courses is stabilizing. Like the Scholastic Aptitude Tests (S.A.T.), the A.C.T. national averages last year remained unchanged from the 1979-80 average. The average A.C.T. score was 18.5 out of a possible 35; S.A.T. scores stayed at 424 for the verbal section and 466 for mathematics. S.A.T. scores had declined for 13 years - A.C.T., for nine years - until 1980.

The doors of equity, opportunity and access have opened and with them the challenge to keep these doors open under severe budget restraints and simultaneously to provide everyone with a quality education. The issue we're facing now is can we have equality of educational opportunity and educational excellence at the same time. Our answer to this query must always be "yes"; this must remain a goal of American education since it has been the uncontested strength of the American educational system.

Although a great deal of progress has been made, we "have miles to go before we sleep." The unfinished agenda for America's schools must continue to focus on three priority areas for the 80's. These include:

1. Fulfilling the promise of America for the poor, linguistically different and handicapped citizens of this country, even though Federal, State and local education budgets are constricting.
2. Providing a better quality education for all of America's children and youth, with an emphasis on "toughning up" the curriculum with more mathematics science and foreign languages requirements.
3. Continuing the quest for successful basic skills programs to avoid wasting the precious few dollars we have by reinventing the wheel in areas where we know what works.

There are several points that I would like to make on each of these priority areas, not to give the answers, but to stimulate dialogue on the topics which I hope will continue throughout the conference.

I. CHARACTERISTICS OF PROGRAMS AND SCHOOLS THAT WORK FOR POOR STUDENTS

It is well documented that schools are not making an impact upon student achievement independent of their family backgrounds and general context (Persell, 1977; Sloan 1978: Coleman, 1966). Numerous research studies, Goldstein (1977) as well as National, State and local testing programs report that poor Black students consistently fail to score as high on standardized achievement tests as their middle-class counterparts. Although there is agreement in the literature that low socioeconomic students do more poorly academically than their more priviledged, middle-class counterparts, there is not a consensus on the cause of the underachievement, nor on the solution to the problem. Persell (1977) rightly points out that the existing differences are viewed as causes of low achievement, when no such casual evidence exists.

The studies of Coleman (1966), Jensen (1972), and Jencks, (1974), led many to believe that schools could not be effective for Low SES students because of inherent deficiencies, evironmental and/or cultural factors. A new set of studies, the School Effectiveness Studies, indicate there are schools that are instructionally effective for low-income students. This, these researchers contend, indicates that schools can be made effective for low-income students (Edmonds, 1978). These studies go on to identify the characteristics of schools that are effective for the poor (Weber, 1971; Edmonds, 1979; Brookover and Lezotte, 1979; Clark, Lotto, McCarthy, 1980).

"School Effectiveness" studies show hope and how, pointing out and describing schools that are instructionally effective for low socioeconomic students. The fact that these schools exist proves that the possibility of having good schools for the poor exists and that school improvement for this clientele is within the locus of control of the schools.

The identified schools have five (5) characteristics:

1. There is strong instructional leadership exerted, most often by the principal.
2. There is an orderly, positive school climate.
3. There is an emphasis on specifying objectives and expected achievement in the basic skills. Objectives then are carefully monitored for mastery.
4. There is a belief that all children can learn and master the basic skills objectives. There are high levels of expectation of success for students and teachers.
5. Assessment is an integral part of the program and results are used to improve instruction and for accountability.

There is a specific need to examine document and replicate broadly the characteristics of effective schools which are in the locus of control of the schools. The identified characteristics can be used to guide further exploration into the search for these effective schools and why they are effective. A recurring characteristic noted among effective schools is "strong instructional leadership", usually provided by the building principal.

This fact has definite implications for the staff development of principals to include information on instructional effectiveness characteristics and how to bring it about for low-income students.

Any school district interested in school improvement for the poor must seriously review these five characteristics and consider designing means for operationalizing them in their schools. Making schools effective for the urban and rural poor must definitely be on our unfinished agenda for the 80's.

II. IMPROVING THE QUALITY OF EDUCATION FOR ALL STUDENTS

The very future of America requires that we become sufficiently productive to be more competitive in the increasingly complex industrialized work community. Increased productivity depends on our effectiveness in applying greatly improved methods of training the general population. As you well know, teaching reading is central to that task. Our collective failure to find working solutions have been demonstrated to be a critical defect that must and can be reversed without further delay.

We find ourselves also in a life and death struggle with the Soviet Union, according to a succession of Presidents. Dr. Izaak Wirszup, University of Chicago, expert on Soviet versus U.S. education, warns, "The recent Soviet education mobilization . . . poses a formidable challenge to the national security of the United States." Dr. Wirszup based his conclusion on the impressive success achieved by the USSR in increasing their total number of secondary school graduates from 1,728,000 in 1957 to over 5,200,000 in 1975. This represented 98% of those enrolled as opposed to our success with 75% of enrollees that same year. Not only did the numbers increase dramatically, but the curriculum content improved even more impressively. The almost unbelievable level of 10 years of math, 10 years of geometry including solid geometry became the curriculum requirements. Add to that 2 years of calculus, 5 years of physics, 4 years of chemistry, one year of astronomy, 5 1/2 years of biology, 5 years of geography, 3 years of mechanical drawing, 10 years of workshop training, 6 years of foreign language, Russian language and Russian literature, and other elective courses. In contrast, our curriculum content is only a fraction of theirs, and is decreasing as schools seek to match the decline in student productivity.

In addition, Japan has experienced a similar education mobilization; as a result, many fields formerly dominated by our engineers and scholars have been taken over, for all practical purposes by the Japanese. Their excellence in education is rapidly exceeding that of the Soviets. Dr. Frank Press, a geophysicist and President of the National Academy of Sciences, states that America is a "nation of technological illiterates." Speaking in Boulder, Colorado, recently, he advocated higher academic requirements for secondary schools, pointing out that 50% of the high school graduates in the United States have had only one year of science - probably biology - and 30% of the nation's science teachers "were never trained as science teachers." According to the University of California at San Diego, half of the 2,700 doctorates in engineering in the U.S. last year were earned by foreigners.

No wonder Americans fear change in the job market. Until there is a new emphasis on excellence in the study of science, technology, and language arts, and until adequate capital investment is made in those education fields, we will continue to be technologically and esthetically illiterate. This is a sign of our times that must be reversed. Academic excellence and essential background for literacy and technical skills useful throughout life and career must be taught to all students of widely varying capabilities.

A Washington Post (Sunday, February 21, 1982) article reporting on a Pentagon sponsored testing of 11,914 men and women selected to represent a cross section of the U.S.A. population, reflects in its results the widely varying education received by our youth. The data laid bare the differences between white (56%), Blacks (24%), Hispanics (31%) performance, and the dire need to deal with both a solution to teaching underachievers, and enriching the curriculum for all. The dropout, as expected, scored significantly below the averages, which again pointed up the need to keep students in school, for they do not learn on their own after leaving. A later release by the Los Angeles Times (February 23, 1982) adds a statement by the researchers raising the possibility that the differences were due to genetic factors. This is an unfortunate and uneducated conclusion that is raised time and again to excuse the failure of the education system to deal with all our population. Schools can and must educate all of our citizens so they may be productive contributors to our society. With our science and technology lag, we need everyone! Gaining information more rapidly and accurately is of utmost necessity in a "world producing over 1,000 books per day and the rate continues to rise sharply," according to Toffler. All students are entitled to an education that works for them and enables them to make a contribution to our economy and our very existence as a free nation.

Improving the general quality of education for all students must be on our unfinished agenda for the 80's if we are to remain world leaders in technological developments.

III. CONTINUING THE QUEST FOR SUCCESSFUL PROGRAMS

With the increase in accountability systems, the demand for tangible results, and the reduction of risk capital at the Federal, State and local levels, the focus for the 80's will center on the "Quest for Successful Basic Skills Programs". There will be a close scrutiny of what really works, that is, what instructional systems are successful in appreciably and measurably increasing the achievement levels of students. Jumping from one band wagon to another will no longer suffice - we have done that long enough! Louise A. Taylor aptly captures our historical quest for a panacea for our reading ills in From Genesis to Revelations. We must keep our past, our history in mind as we move forward so that we do not repeat the mistakes of the past, and so that we can build on the knowledge and foundation resulting from our past experiences. There is no panacea or magic method or material! Our history proves that!

From Genesis to Revelation
(Oct., 1980) (Reading Teacher)
Louise A. Taylor (Elementary Reading Specialist - Fort Worth, Texas School District

> In the beginning, there was the alphabet. And the teachers shouted unto those begat by the ancients, "Repeat after me and ye shall learn to read." So the pupils chanted mightily and chafed under the rod, but they learned not. Wherefore, there rose in the land, a might man of the lineage of McGuffey saying, "Take ye these readers and teach from them. For the percepts set forth shall make readers of all pupils."
> And some learned, but many did not.
> Then others rose in the land saying, "We will take the social studies and out of it make a core so that each child shall learn to read about the snow in Texas, the Eskimos of Alaska and the country of Estonia."

But the children read not.
For of snow in Texas there is little, Eskimos in Alaska are few, and of Estonia there is none.
And the children cared not.
Now other voices were heard: "Let us teach physical education. Then brains will become larger and the children may learn to read."
So the children swung from bars and took the vitamin pills, but they read not.
Yea, their height did increase and their feet did grow longer, but their brains remained the same size.
But lo, there rose in the heavens a Sputnik which did throw all into a panic and caused flesh to shout that "Jonathan doth not read. That is why we have no Sputnik."
So the wisest men of the land gathered, saying, "We shall teach science and the new math so that all can read." Then the children dissected frogs and counted from base 2, but they read not.
Now for many generations the teachers are meek. For they had believed they shall inherit the earth, but all they have inherited are reading problems.
They complain aloud, but to no avail.
Now outside the gates of the schools, the businessmen and parents are wailing and gnashing their teeth, saying, "We spent millions of gold pieces every year to teach the children to read, but they learn not. Ye talk and talk, yet we hear only the jawbone of an ass. Verily, we shall vote no more money for bonds, for the children toil not, neither do they read." And it came to pass that the learned men said, "Let us make reading the basis of our curriculum and put each child on that child's own reading level. Indeed, let us do something quickly before those without the gates take us and hang us by our curricula. Surely we shall reach the promised land where all shall read, write, and think.
And the teachers shout, "AMEN."

WHAT WORKS? WHAT DO YOU KNOW ABOUT INSTRUCTIONAL VARIABLES ASSOCIATED WITH EFFECTIVE CLASSROOM TEACHING OF BASIC SKILLS?

Examination of the research of Brophy and Good, Bloom, Carroll, Block, Cohen and Stallings show the fifteen (15) variables associated with effective instructional programs in the classroom. These variables must be operational being taught to teachers and administrators and brought into every classroom as a part of each teacher's normal teaching strategies. The 15 steps include:

1. Determination of what is to be taught based on a predetermined developmental scope and sequence of content and skills (curriculum) and predetermined standards of achievement and mastery levels/indicators. (What is to be taught? What level of mastery constitutes successful achievement? Based on what assessment tool and scale?)

2. Diagnosis of students' instructional levels and instructional skills strengths and weaknesses in relationship to objectives and standards. (What does each student know and/or need to learn in relationship to the curriculum objectives?)
3. Development of instructional plans and strategies to meet the concept development/skills needs of each child - (Not an emphasis on the coverage of chapters/pages) (What are the best strategies/lesson sequence and lessons to use in getting across the identified concepts and skills?)
4. Placement of students in proper level instructional lessons and materials geared to their diagnosed needs and levels. (What lessons and materials are you going to use in relationship to student needs and levels?)
5. A coordinated program of direct instruction and independent practice at the appropriate skills development level of each student. (How are you going to introduce/teach the skill directly? What materials can you use to give students practice on what you taught?)

   Students understand the purpose for the learning activity assigned and see the connection between the skills being presented and ultimately obtaining functional, utilitarian literacy skills. (Do students know why they are doing the activity, ie. worksheet/workbook exercise, in relationship to what they are expected to learn/master? Can they see how this skill can help them later?)
6. Maximum time on the assigned tasks by students and maximum direct instructional interaction time between teacher (may be surrogate as in peer tutoring) and student. (Are students actually attending during direct instruction and follow up? Is direct teaching taking place?)
7. Use of multiple materials to develop concepts/skills with an instructional consistency of methods among the materials. The use of the materials consistent with their author's design. (Do the approaches taken in the multiple materials reinforce each other or conflict?)

8. Skills are systematically, sequentially, and meaningfully developed with mastery as a goal. (Are you hopping from page to page and lesson to lesson with no regard for mastery of objectives (concepts and skills) and sequencing identified earlier as the centrix/focus of your instruction?)
9. Skills that are learned are immediately applied - for example in reading, there is an emphasis on reading for enjoyment and information. (After a skill is taught, is time set aside for using that skill in a planned structure situation?)
10. Communications skills instruction is integrated and designed to be mutually reinforcing (e.g., reading, writing, oral communications), not taught as isolated, separate subjects. (Are you artificially separating the communication skills in teaching?)
11. Tests, instruction, and materials are intricately interrelated and systematically reinforce each other. (Do you test on one concept/skill, instruct on another and assign materials on still another set of concepts/skills?)
12. A management and record keeping system which tracks/monitors the progress of each child continuously and that acts as a diagnostic and summary instrument which points up areas of pupil achievement and needs is kept. (Do you have a system which tells which skills/content have been mastered by which child and what the remaining needs are?)
13. The teacher believes that each student can master the objectives and seeks the cause of failure in the instructional program, not the student. (If a student fails to learn a concept of skill do you examine possible causes, such as the student's readiness for concepts/skills, clarity of presentation, adequate reinforcement, other possible causes rather than that the kid is just dumb?)
14. A well coordinated basic skills program, i.e., instructional consistency between intervention programs such as Title I, Special Education, etc. and classroom teachers' programs. Resource personnel (e.g., paraprofessionals, aides, volunteers) are trained on how to assist the teacher before they are placed in

the classroom - their programs being coordinated with the classroom teacher's instructional goals and programs. (Is there only one well integrated instructional program for each student receiving multiple services? Has the lead roles and reinforcement roles been identified? Are all instructional providers working on the same skills/concept with the student, not using conflicting approaches and materials?)

15. There is planned, active parent involvement with a focus on shared decision making and parents as reinforcers of instruction. There is frequent communication between the teacher and parents related to pupil progress - positive as well as negative. (Are parents involved in a meaningful way in decision-making? Are parents provided with ways and means to reinforce classroom instruction? Do parents know where there children are in the instructional sequence? When he/she excels or is behind?)

All researchers agree that the teacher is the critical element in a student's learning process. The quality of a teacher's instructional and classroom management skills makes a difference in his or her ability to effectively teach basic skills. The fifteen (15) instructional variables reviewed show up repeatedly as essentials to good teaching in the research and in conversations/interviews with effective teachers and administrators in effective schools. On the unfinished agenda for the 80's we must have the quest for finding "what works" and then we must design and implement a strategy for making what we know work; a mandated part of every classroom teacher's repertoire of teaching strategies. Dogged monitoring of classroom implementation by the administrator, following staff development, becomes an imperative to putting what we know to work in the classroom.

The litany of questions on schools effectiveness will certainly steal the spotlight in the 80's.

- Which schools teach which things uncommonly well?
- Which schools teach things poorly, if at all?
- What instructional innovations that are being done at two or more schools could be disseminated to the entire schools system?
- Which approaches are some schools clinging to in the face of overwhelming evidence that they don't work?

- How would you rate the principals of those schools? Good? Bad? Indifferent?
- Are there schools serving essentially similar populations doing a significantly better job? Why?
- How can one best absorb the routine and report on what is going on?
- Do any or all of the local elementary schools use certain instructional methods of teaching reading? Does this seem to make any difference? Which approaches seem to work better for what sort of children?
- Which schools in the less affluent parts of town routinely surpass their companion schools in math and reading achievement? Why?
- Is it something as un-Xeroxable as an outstanding principal or something as easily adopted as a textbook or instructional approach?
- Are there instructive correlations between achievement scores and the amount of homework assigned?
- Are there observable differences among teachers with respect to ease with their subject matter? Do these translate into greater achievement gains for students?
- What are some of the successful techniques for establishing the classroom management techniques and the disciplines and order that make learning possible? Can these be "taught"/transferred to principals and teachers? What are the best methods of achieving this transfer of successful behaviors?
- What is the role of the various types of testing programs (i.e., competency testing program, standardized tests, teacher-made/publisher tests, etc.) in instructional improvement? Should the test dictate what we teach or should what we teach dictate what we test? What is the implication of this for selection standardized tests?
- What are the best ways to get schools to use the results of research in setting an instructional philosophy an underlying theoretical base, and in program design, implementation and evaluation?

BASIC SKILLS AREAS FOR THE UNFINISHED AGENDA IN THE 80's

There appears to be six (6) areas of critical need in the 80's:

1. Making all schools and teachers consistently effective in their delivery of instruction to poor and linguistically different students. As apart of this process, improving the

literacy levels of low literate adults, the parents of many of these children and helping these parents to help their children be successful in school.

2. Developing comprehension problem solving skills, especially the higher level thinking skills in middle and upper grades and high schools with an integrated Basic Skills in the Content "focus not in isolated classes with isolated exercises."
3. Developing viable writing and oral language development, assessment and instructional models, especially at the middle and upper levels.
4. Coordinating and integrating basic skills content instruction at the high school level. Coordinating and integrating the basic skills programs funded by varied sources - Federal, State and local through activities such as - joint assessments, planning, instruction, materials, staff development and evaluation.
5. Getting what we already know about successful basic skills programs into practice in all the schools and classrooms of this nation and extending our knowledge of what works.
6. Restoring the public's confidence in the public school's ability to deliver quality Basic Skills Programs.

Ultimately, however, let us be extremely wary about using basic skills to judge the present and future worth of our children. Tests, grades, and teachers are not omnipotent in assessing the potential of a human being. Every educator should be humbled in these memories:

> GEORGE BERNARD SHAW WAS CONSIDERED A VERY POOR SPELLER.
>
> PABLO PICASSO WAS JUDGED TO BE SLOW IN MATHEMATICS.
>
> ALBERT EINSTEIN, SALVADOR DALI, EDGAR ALLEN POE, GEORGE BERNARD SHAW, IGNACI PADEREWSKI AND JAMES WHISTLER WERE ALL EXPELLED FROM SCHOOL.
>
> EINSTEIN CONSISTENTLY FLUNKED MATHEMATICS! HE DIDN'T READ WELL EITHER AND WAS IN THE SLOW GROUP.
>
> THOMAS EDISON FINALLY FINISHED HIGH SCHOOL, BUT HE WAS AT THE BOTTOM OF HIS GRADUATION CLASS.
>
> ABRAHAM LINCOLN AND HENRY FORD, IN THEIR EARLY SCHOOL LIFE, WERE BRANDED AS PERSONS WHO SHOWED NO PROMISE.

You know of the great contributions these people made, each in his own way to the world in which he lived.

Let us remember that the real purpose of education - is NOT to count students OUT but to fit them INTO the society. The challenge of the 80's is to insure, as one poet states:

> To every person the right
> To every person the opportunity
> To live, to grow, and to become
> Whatever his thinking, talents, and efforts
> Can combine to make him
> This, is the promise of America

The challenge of the 80's is to deliver on the Promise of America for every student in this country - this is what will make America continue to be great!

Source: 1 Basic Skills Issues and Choices   Issues in Basic Skills Planning and Instruction by Reed, L. and Ward, S. (Ed). St. Louis, Missouri: CEMREL, Inc., 1982 (published under contract with the Basic Skills Improvement Program, U.S. Department of Education, Washington, D.C.).

Literacy is Rising, But So Is Demand for Literacy

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Editors' Note: *Reports in the public media have indicated that students are not learning as well as students did in the past. Those reports have contributed in some communities to a crisis attitude in basic skills planning. In this paper John Bormuth summarizes his analysis of several apparently discouraging studies of levels of literacy. He concludes that there is no evidence for a decline in literacy. In fact, there is evidence that literacy in the total population is rising. Bormuth suggests that there is no reason for panic and that attempts at quick changes in schools, especially an emphasis on simpler skills, may be counterproductive. He also suggests that literacy is increasingly important for success in our society and that we must use greater care in assessment of literacy and provide for long-term, close attention to improving literacy instruction for all students.*

People are confused about the nation's level of literacy, and with good reason. Daily, the news media report expert opinions and test scores claiming that the literacy levels of youth in our country are falling, that adult illiteracy is rampant, and that electronic media are making the written word obsolete. Yet, the fact that people can observe that we are making more use of our literacy for more important purposes than ever before would seem to suggest just the opposite. What should be done? Should we beat down the schoolhouse door, throw out the teachers and the books, and mount massive adult literacy programs? Or should we send up a great cheer and announce that the war is won?

Neither. As we shall see, people's own observations, and not those of the experts, are the best indicator of the state of our nation's level of literacy. In fact, the level is generally high, and literacy is a growing force in our economy. But there *is* a true cause for alarm. It is clear that the experts do not know how to define literacy, or how to assess it, and they have not known where literacy has been headed. They have not even been asking the right questions! Instead of asking, How literate are we? they should first have asked, How do we find out how literate we are? Only then can they address the questions, How literate should we be? and, How can we best reach that level of literacy?

This brief essay cannot answer these questions. But we will try to show that they are the primary issues in literacy policy. First, we will identify major flaws in the literacy assessment studies reported in the news. Next, we will examine strong economic trends showing that literacy is an increasingly important force in our country's economy. These discussions will lead to our conclusion that the demand for higher levels of literacy is increasing and spreading to a broader segment of the population.

News Reports of Literacy Assessments

Literacy assessment is not an organized science. It has neither a group of scholars dedicated to its study nor a journal where those studies are systematically reviewed and reported. Instead, the studies are described in unpublished technical reports and publicized in the form of brief news releases. Since the press has little interest in publishing positive results and little knowledge or sophistication in research methods, the public hears only the darkest results and none of the qualifications that moderate and even refute those conclusions.

> ***. . . people's own observations, and not those of the experts, are the best indicator of the state of our nation's level of literacy. In fact, the level is generally high, and literacy is a growing force in our economy.***

Literacy of youth. First, consider the claims reported in the press that the literacy of youth is falling. Such claims are usually based on studies of the scores that students have made on one of the commercial reading tests used routinely by schools. The people who conduct these studies usually give one of these tests to a group of students and then return some years later to give the same test to students at the same age or grade level who are now enrolled in the same schools. Farr, Tuinman, and Rowls (1974) and Harnishfeger and Wiley (1975) searched out these studies and reviewed all that they could find. Their conclusions (which appeared in the news) were that the average scores for all students rose steadily until 1965. Thereafter, the averages of elementary students continued to rise but at a slower rate; the averages of junior high school students leveled off or dropped slightly; and the averages of high school students began a slow but definite decline. What the news did not report was that the reviewers found so many serious flaws in these studies that they placed little faith in their own conclusions.

The list of flaws in literacy assessment is too long and complicated to give here. But at least the most serious and consistent flaw should be described. In order to compare the reading skills of two groups of students, researchers have not only to administer the same test to both groups of students but also to insure that very similar groups of students are given the tests. To claim that reading skills have fallen over time, both of these conditions must be met. It is not difficult to meet the first condition, but the second condition is nearly impossible to meet. School populations change constantly as a result both of shifts in government policies and of changes in the kinds of families who have children attending the school.

One historical change in government policy alone could have resulted in the *appearance* of falling reading scores, even though the reading skills of youth were actually continuing on their previous upward trend. During the early part of the 1960s, schools mounted vigorous campaigns to prevent students from dropping out of school before they graduated. The direct result of this policy change, which is shown in panel A of Figure 1, was reported in the *Digest of Educational Statistics* (1962-), which is published by the Department of Education. Over ten years, the dropout rate was cut to about a fourth of its former level.

In addition, this particular policy produced at least two indirect results. It began to lower the average IQ scores of the students who were enrolled in schools. A study by the Bureau of Labor Statistics (1960) showed that the former dropouts generally had much lower IQs than the students who had been staying in schools. These figures are shown in panel B of Figure 1.

There is a high correlation between students' IQs and their ability to learn reading skills. Therefore, it may safely be assumed that the second indirect effect would be a decrease in reading scores like the one researchers reported. Since only a few elementary school students have dropped out of school in the past, the return of those students to school would be expected to produce a relatively small decrease in gains on reading tests. This was what researchers found had happened. Next, since the dropout rate rises at the junior high school level, those average scores would be expected to level off more or decline a bit, just as they did. And since the dropout rate is highest in the high schools, those averages would be expected to show a definite decline, just as they did. Thus, the reading skills of *all* youth may actually have been continuing on their upward trend throughout this period when the average test scores were declining.

Now this does not prove that reading skills of youth did in fact continue on their previous upward trend. (It shows clearly the danger of comparing dissimilar groups.) The available studies, in fact, *do not tell us what actually happened* to the reading skills of youth during this period of time.

Literacy of Young Adults. The press is also fond of reports that the literacy of college students and recent graduates is declining. Some of these reports are based on students' scores on college entrance examinations, while others are based on the statements of professors and employers who complain that students and recent graduates do not read and write as well as earlier ones. There is little reason to doubt that the average performance of college students and recent graduates has fallen. But, once again the observers are trying to compare groups that have changed in composition.

First, consider the college examiners and professors. Thirty years ago, they saw only the brightest high school graduates. In 1946, only 13 percent of the 18-24 year olds were enrolled in college, according to the *Digest of Educational Statistics* (Department of Health, Education, and Welfare, 1962-). So the professors and examiners were then dealing almost entirely with the academic elite. However, the percentage of youth enrolled in college rose rapidly over the next generation, reaching 34 percent by 1974. The professors were by then seeing more students with only modest intellectual abilities. And the performance of these students was probably below the standards set by earlier, generally more able groups of students. But that did not indicate that the literacy of all young adults was falling. To the contrary, many more young adults were now receiving much more education than before. So the literacy of young adults may in fact have surged upward during this period.

Much the same kind of thing happened to employers. They rarely if ever complain about the literacy of skilled and unskilled laborers.

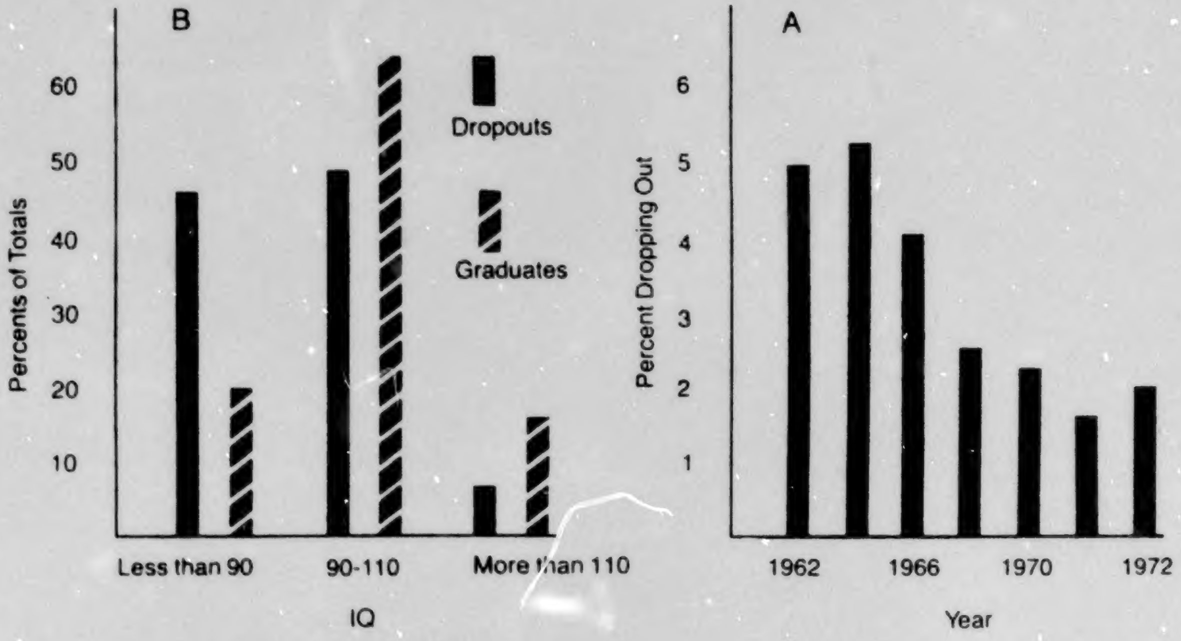

Figure 1. Percent of Students Dropping Out of School from 1962-1972 and Average IQ's of Dropouts and Graduates

Instead, they speak of the reading and writing skills of white-collar workers whose jobs depend heavily on those skills. In 1946, according to the *Statistical Abstracts of the United States* (Bureau of the Census, Annually), less than 36 percent of the labor force was employed in white-collar occupations. During the next few decades, the nation's standard of living rose rapidly, caused largely by the fact that industries employed increasingly advanced technology and grew large enough to enjoy more of the economies of production that come with size. This growth and increase in complexity meant that increasing numbers of people had to be hired in managerial, professional, technical, and clerical roles. By 1974, the number of white-collar workers had risen to 48 percent of the labor force.

To fill that many jobs, employers had to hire more people with lesser intellectual abilities than many of the bright people who had easily gotten those jobs in the past. So, like college professors and examiners, when employers complain about literacy skills, they are not reporting on the literacy trends of all young adults. Rather, they are telling us that when they have to hire more people who did not learn to read and write well in school, these people also do not read and write well at work. That may, in itself, qualify as alarming news. But it does not mean that the literacy of all young adults is falling.

People are literate when they can exchange as much information as they want or need using the written word. So their literacy can be measured directly only by testing their ability to comprehend materials that they actually need to read in their day-to-day lives or materials they want to read.

The most serious faults in the studies described up to this point stem from the fact that they did not measure literacy itself. People are literate when they can exchange as much information as they want or need using the written word. So their literacy can be measured directly only by testing their ability to comprehend materials that they actually need to read in their day-to-day lives or materials they want to read. Instead of measuring literacy directly using tests that have students reading many different but relevant materials, many of these studies tried to measure literacy indirectly using people's scores on some single test of their reading skills. A reader's score on one of these comprehension tests directly measures *only* his or her literacy with respect to the particular material tested.

People's literacy *can* be inferred using their scores on a test of reading and writing skills. But doing so with accuracy requires other evidence, such as knowledge of the level of difficulty of the materials which the person taking the test *needs* to read in daily life. It is possible that reading scores could go up and literacy levels still fall if the materials encountered in day-to-day living, particularly at work, were more demanding than the material on the tests. At present, we have no data on the possible increase or decrease in the demands of reading material over time.

Once again, nothing that was said here proves that people's literacy is rising, falling, or stable. What it does show is that the studies described up to this point provide very weak and possibly misleading evidence about the trend of literacy among youth and young adults.

Literacy of Adults. For almost two centuries, the Bureau of the Census has counted the adults in this nation who say that they are illiterate. According to the Bureau of the Census (1975), the number of illiterate adults has steadily declined, until it now stands near 1 percent of the population. Recently, the news media have reported a number of studies that tested adults' mastery of such useful reading tasks as the ability to comprehend forms and directions on packages (Harris and Associates, 1970; Murphy, 1973, 1975; Northcutt, 1975). Those adults were counted as being illiterate who failed to answer as many questions as the researchers thought they should. Illiteracy rates of 10-20 percent were reported for all adults, and illiteracy rates of 5-11 percent were reported for college graduates and professional and managerial workers.

The most serious flaw in these studies was that researchers could offer no explanations for why they set the cut-off scores so high. Donald Fisher (1978, 1979) doubted that any college graduate or managerial or professional worker was illiterate. So he used the "illiteracy rates" of these groups as an estimate of how much too high the cut-off scores were for the total population of adults. When he recalculated the rates given in the studies to remove this bias, the illiteracy rates for all adults fell to 1-7 percent. Then he noted that most of the errors had been made on a small number of questions. When he systematically examined some of these, he found that most of the errors were caused by failure to comprehend the questions being asked rather than by failure to comprehend the materials that were supposedly being tested.

Thus, it seems probable that the adult illiteracy rate is about 1 percent, as the Bureau of the Census says it is, and that it is found almost entirely among the blind, the severely mentally retarded, the very old, and non-English-speaking immigrants. But this does not prove that the literacy level is stable or rising. As most people use the term, to be *illiterate* means to have a useless level of ability to use the written word. But to be *literate* does not mean simply to have a next-to-useless level of ability to read and write. There are many levels of literacy; for example, there is a broad, gray region of "subliteracy" which separates the illiterate from the literate. There are also, of course, many higher levels of literacy.

In the final analysis, the test data can neither support nor refute propositions that the level of literacy in our nation is high or low, rising or falling. This analysis of studies which report test results does appear to refute the claim that adult illiteracy is rampant, however. It also suggests that literacy testing and literacy assessment are primitive arts. The studies discussed ignored critical factors, and the results reported have confused and misled even the experts and the best informed policy makers.

Economic Indications of Literacy

Fortunately, people have not had to rely entirely on reports based on literacy tests. When they see people reading, they are seeing the evidence of literacy itself. And when they see materials being manufactured and distributed and students being taught to read and write, they are seeing the activities needed to make that literacy possible.

Literacy has often been made to seem economically unimportant. It is described as an educational concern, as an aesthetic endeavor, as a matter of social equity, or as a necessity of democratic government. Clearly literacy is far more than any or all of these things — it plays a vital role in our economy, too. Information is our most important resource. Advances in technology and increases in the complexity of community organization have made the communication of that information a larger and more important task. Though other media have provided some help, the written word has carried a large, important, and rapidly increasing load.

The author of this paper published a study (1978) that attempted to gather a comprehensive set of economic data related to literacy. It covered selected years from 1947 through 1972. (The years considered were those for which reasonably complete data were available — the years in which the Census of Manufacturers was conducted by the Bureau of the Census.) Whenever possible, the study examined measures of actual events and objects, such as time spent reading and writing on the job or the number of books published. Then, to provide a comprehensive view of the trend of activities related to literacy, expenditures for all of these variables were totaled. To ensure that those trends were real, all data were expressed in dollars on a per person basis, and the dollar figures were corrected for inflation by converting them to 1976 dollars.

The dollar amounts are summarized in Table 1. The first three lines show the amounts spent for activities and materials related to literacy, and the fourth line shows the amounts spent for reading and writing on the job. The fifth line shows the totals of these expenditures, and the last two lines express the amounts on a per person basis and as a percentage of the gross national product (GNP), a measure of the value of the goods and services that the nation produces during a given year. The column at the far right shows the rate of increase of the figures in each row. (Rates are annually compounded, to be conservative.) Note that every category of ex-

Table 1
Expenditures Related to Literacy*

Item	Amounts by Year (in billions of dollars)						
	1947	1954	1958	1963	1967	1972	Annual percentage increase
Materials and supplies	10.1	11.4	12.6	15.0	18.0	20.0	2.8
Distribution of materials	3.7	4.3	4.8	7.2	8.8	11.4	4.6
Instruction in literacy skills	4.9	9.6	12.5	16.5	22.1	28.2	7.2
Reading and writing at work	119.7	148.4	174.2	213.0	289.7	347.4	4.4
Total	138.4	173.7	204.1	251.7	338.6	407.0	4.4
Dollars per person	961	1070	1172	1330	1704	1949	2.9
Percent of the GNP	21	22	24	24	26	26	1.0

*All figures are corrected for inflation by conversion to 1976 dollars.

penditure grew faster than the population (which increased at an annual rate of 1.5 percent during this period), faster than the gross national product, and even faster than inflation.

To a large extent, the increase in materials and supplies was due to a rise in the number of books sold (from 6.8 to 8.6 per person), and to a rise in the number of newspaper pages published daily (from 13 to 20 per person). No record seems to have been kept of the numbers of periodicals and other publications published throughout this period or of the numbers of pencils, sheets of writing paper, or other supplies sold. However, it could be determined that the total expenditures for these items rose from $26 to $33 per person. Also, no accounting could be made for the number of typewriters, copy machines, computers, and similar equipment. However, observation indicates that expenditures for them grew at much faster rates than expenditures for the items that were accounted for.

Expenditures for distributing materials rose at an annual rate of 4.6 percent, from $3.7 billion in 1947 to $11.4 billion in 1972. This was partially due to a 60 percent increase in the total number of public libraries, whose overall collections tripled and whose circulations rose from 2.5 to 4.4 items per person annually. The rise in distribution figures was also influenced by the fact that mail delivered rose from 297 to 418 pieces per person annually and that expenditures for telegraphy rose from $4.48 to $5.16 per person. These figures do not account for the growth in the number and sizes of private and industrial libraries or for the increase in the amount of information distributed in the form of printing on packages (or for the many other means of distributing printed information). But, once again, it seems likely that expenditures for the activities not accounted for were growing at least as fast as those that could be accounted for.

Estimated expenditures for instruction in literacy skills rose from $4.9 to $28.2 billion, at the astounding annual rate of 7.2 percent. Much of this rise was a response to the baby boom, some was a result of the rise in the days of instruction per year from 137 to 157 days per student, and some occurred because of an increase in the number of teachers per student.

The largest item among the four categories was for reading and writing at work (calculated from wages paid for such work). Growth in this category was caused by an increase in the size of the white-collar work force, which grew from 37 to 48 percent of the total work force in the period 1947–1972. In 1971, reading and writing consumed 141 minutes, or 29 percent, of the average employed person's work day (Sharon, 1972). Over the whole period studied, the estimated expenditures rose from about $120 billion to over $347 billion. No formal effort was made to set a value on the time that people spend reading and writing outside of work. However, rising expenditures for books, magazines, and newspapers make it seem likely that any such estimates would have kept pace with those for reading and writing at work.

When the expenditures for these four categories were totaled, those totals rose from $138.4 billion to $407 billion, at an annual rate of 4.4 percent. Total expenditures per person for these literacy-related activities rose from $961 to $1,949, at an annual rate of 2.9 percent. And total expenditures for literacy rose faster than the gross national product, rising from 21 to 26 percent of that figure.

These totals do not include expenditures for many other items relevant to trends in literacy, some of which were too complex to be included. But the items omitted would have increased the totals shown and would probably have grown as fast or faster than the items that have been discussed here.

Conclusions

The first conclusion that can be drawn from these figures is that literacy is very important in our society. By 1972, the total expenditure for literacy-related items and activities reached $407 billion, over one fourth of the gross national product, 1.13 times the size of all federal expenditures, over twice the size of the defense budget, and 5.8 times the total the nation spent for new and used cars during that year. These data make it clear that literacy has become a major economic force in this country.

Second, in view of the higher percentage of students staying in school and the higher percentage of workers in white-collar jobs, creating a demand for higher levels of literacy over a broader portion of the population, the level of literacy of the population as a whole may very well be rising. Analyses of the test data certainly do not indicate that a panic over illiteracy is justified.

Third, people want to be literate, not merely more literate than they were before. To most people, being literate means to be able to comprehend or write competently materials that they realistically want or need to read or write. Having less ability than that forces them and society to forgo important opportunities. Because the media usually report scores on reading tests as indicators of literacy, they tend to focus on reading skills with no attention to the difficulty of the material people want or need to read.

Fourth, studies on literacy should first ask how we ought to go about finding out if a person is literate. Thereafter, the issue is not whether people are growing more or less literate. The central issues are whether people are as literate as they need to be and how to identify the best course of action for making and keeping them this literate.

Clearly, our bed and board depend heavily on how well we can use the written word. Tests may not yet be able to tell us whether we can use it as well as we should. But economic data give us important parts of the answer. People are making more use of literacy for more important purposes. They could not be doing this unless schools had been steadily raising more people to steadily higher levels of literacy. But is that enough? The trend is pointing steeply upward into a future where even more people must reach even higher levels of literacy. To arrive at that future, schools will need a lot of help. It will not be enough merely to provide more of the same instruction as before. The instruction will have to become even more productive. The papers in this handbook are efforts to achieve that productivity.

References

Bormuth, J.R. "Value and Volume of Literacy." *Visible Language*, 12, 2 (1978): 118-161.

Bureau of the Census. *Historical Statistics of the United States, Colonial Times to 1970*. Washington, D.C.: 1975.

Bureau of the Census. *Statistical Abstracts of the United States*. Washington, D.C.: Annually.

Bureau of the Census. *Census of Manufacturers.* Washington, D.C.: 1947, 1954, 1958, 1963, 1967, 1972.

Bureau of Labor Statistics. *School and Early Employment Experiences of Youth: A Report on Seven Communities, 1952-1957* (Bulletin No. 1277). Washington, D.C.: August 1960.

Department of Health, Education, and Welfare. *Biennial Survey of Education in the United States.* Washington, D.C.: 1938-1958.

Department of Health, Education, and Welfare. *Digest of Educational Statistics.* Washington, D.C.: 1962-present.

Farr, R.; Tuinman, J.; and Rowls, M. *Reading Achievement in the United States: Then and Now.* Bloomington, Indiana: Indiana University, 1974.

Fisher, D.L. *Functional Literacy in the Schools.* Washington, D.C.: National Institute of Education, 1978.

Fisher, D.L. "Functional Literacy: Information Processing Dysfunction and Metacognition." Paper presented at the Functional Literacy Conference, Indiana University, June 1979. Proceedings in press.

Harnishfeger, A., and Wiley, D.E. *Achievement Test Scores Decline: Do We Need to Worry?* Chicago, Illinois: CEMREL, 1975.

Louis Harris and Associates. *Survival Literacy Study* (No. 2036). New York: 1970.

Murphy, R.T. *Adult Functional Reading Study* (No. 73-48). Princeton, New Jersey: Educational Testing Service, 1973.

Murphy, R.T. *Adult Functional Reading Study* (No. 75-2). Princeton, New Jersey: Educational Testing Service, 1975.

Northcutt, N. *Adult Functional Competency: A Summary.* Austin, Texas: University of Texas, 1975.

Sharon, A.T. *Reading Activities of American Adults* (No. 72-24). Princeton, New Jersey: Educational Testing Service, 1972.

DEFINING BASIC SKILLS AND STANDARDS FOR BASIC SKILLS PROGRAMS

Excerpts from Basic Skills Improvement Program-- Management/Evaluation Design

Shirely A. Jackson, Director

Basic Skills Improvement Program
U.S. Department of Education
September 1980

What do we mean by basic skills? Most are reluctant to pronounce a hard and fast definition. Each school must determine for itself what it considers "basic" to its children's education. But fundamental to all educational programs are reading', writing', and 'rithmetic. To these can be added the skills of speaking, listening, and problem solving, and of course the skills of music and art and mechanical skills. These skills are considered to be essential to all learning and to survival in a modern society.

The Congress has singled four of these skills on which it would focus national concern: reading, mathematics, and written and oral communication. These are designated in the Title II, Basic Skills Improvement legislation under P.L. 95-561, a newly enacted program designed to demonstrate methods, practices, and materials effective in the teaching and learning of the basic skills and to assist States in developing programs to meet the needs of the communities.

Emphasis is not on developing minimum skills but on using a developmental continuum in developing skills. We are being asked to test the validity of ideas and to demonstrate the effectiveness of promising practices, procedures, products and programs in meeting the full spectrum of basic skills needs among our elementary and secondary school students and functionally illiterate adults.

The Basic Skills program supports no specific methodology or material of improving basic skills and believes that good programs anywhere on the continuum from holistic to specific skills can be made to work for children, youth and adults in the appropriate design and context. It does, however, support the diagnostic/prescriptive and mastery learning concepts of individualized instruction consistently borne out in the research as instructional strategies effective in the teaching of the basic skills.

Further explication of what the specific basic skills might be is included in Standards: A Way of Measuring Success: What Do We Know About

Standards for Effective Basic Skills Programs? (USOE, 1979), a publication which delineates program standards generated by the major curriculum organizations (NCTD, IRA, NCTM, SCA, ASLHA).

In summary, the BSIP does not endorse any method of teaching reading, mathematics, oral or written communications, and it is not one of the selection or review criteria addressed in its regulations. We are more concerned about the consistence, feasibility, and proven effectiveness of approach(es) forwarded for a particular target population based on their assessed needs. Beyond the curriculum areas identified in the law, the BSIP does not define Basic Skills. That is a State and/or local perogative.

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WHAT DO WE KNOW ABOUT STANDARDS FOR EFFECTIVE BASIC SKILLS PROGRAMS?

U.S. Department of Health, Education and Welfare
Office of Education
Basic Skills Improvement Program
August, 1979

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Preface

The purpose of this booklet is to provide information on what is known about standards for effective basic skills improvement programs to persons developing basic skills improvement programs, philosophies, standards, and strategies. This booklet will provide to eligible applicants of Title II grants and contracts access to current thinking by practicing professionals in the field on standards for effective basic skills programs.

We understand that opinions differ within the profession on how best to structure basic skills improvement programs. However, these standards represent a convergence of thoughts on the subjects by a broad range of opinions by many thousands of professionals throughout this nation. It is intended that these standards, compiled with your own research and experience, will assist you in developing a pedagogically sound program of basic skills improvement in your schools.

In a democracy, success and survival require the possession of certain basic skills on the part of the entire population. People must be able to listen to directions and questions with full understanding; to speak clearly so that they may be understood; to read well enough to follow directions and to understand the main events of the day; to write well enough to fill out forms and applications and to communicate with others on paper; to solve the problems that life continually poses; and to compute well enough to understand such concepts as making change, gas mileage, discounts, sales tax, and so forth. People who are deficient in one or more of these areas are said to lack the basic skills no matter what their age group--preschool children, school-age students, out-of-school youth, and adults, including senior citizens. Various programs now disparately try to remedy this deficit in basic skills. The premise of Title II is that a comprehensive plan aimed at coordinating the efforts of all local, State and Federal programs, is needed. These programs must reflect the best thinking available from research and practice relative to basic skills improvement.

BASIC SKILLS DEFINED

The legislative authority for the U.S. Office of Education (USOE) basic skills effort is P.L. 95-561, Title II: Basic Skills Improvement Act. The legislation is designed to encourage Federal, State and local educational agencies with the assistance of the private sector, to utilize all available resources to improve instruction so that all children, youth, and adults are able to master the basic skills of reading, mathematics, and effective communication, both oral and written.

The Office of Education recognizes that there are other skills beyond those referred to by Congress in the Basic Skills Improvement Act which are of fundamental importance to the individual. At this time thirty-six States have defined, often by law, basic proficiency standards needed by their citizens. However, those proficiency standards usually include the basic skills listed in the Title II definition.

From December, 1977 to December, 1978, prior to the passing of Title II, the U.S. Office of Education (USOE) Steering Committee for Basic Skills Coordination, sponsored six regional workshops and a national conference to explore with administrators, teachers, parents, community leaders, and professional organizations issues relative to designing effective basic skills improvement programs.

It was repeatedly emphasized at these meetings that although standards for student performance exists widely, standards for effective basic skills improvement programs were virtually nonexistent. Repeatedly, it was emphasized that the educational community does know what program components comprise effective basic skills efforts and that these should be shared across the nation. The purpose of this booklet is to share what is known about standards for effective basic skills programs.

As a result of an invitation from USOE, four national professional organizations whose major focus is on improving one or more of the basic skills curriculum areas, submitted standards for effective basic skills programs.

1. "POSITION PAPER ON BASIC MATHEMATICAL SKILLS" (January, 1977)
   Task Force on Basic Mathematical Skills
   National Council of Supervisors of Mathematics

   The report of the Kansas City Coordinating Conference on Mathematics Issues of the National Council of Teachers of Mathematics offers additional perspectives into the development of high quality basic mathematics programs

2. STANDARDS FOR BASIC SKILLS WRITING PROGRAMS (March, 1979)
   National Council of Teachers of English

3. STANDARDS FOR EFFECTIVE ORAL COMMUNICATIONS PROGRAMS (March, 1979)
   American Speech-Language-Hearing Association
   Speech-Communication Association

4. GUIDELINES FOR THE PROFESSIONAL PREPARATION OF READING TEACHERS (May, 1978)
   Professional Standards and Ethics Committee

Shirley Jackson's article entitled "The Quest for Reading Programs That Work", published in Educational Leadership (December, 1978), identifies fifteen (15) common characteristics found in nationally validated reading programs. These fifteen characteristics obviously point to standards for the development of effective basic skills improvement programs.

The Jackson article along with "THAT ALL MAY READ"-Reading Program Assessment Scale and the Flow Chart for Program Assessment and Planning may be used as standards by program developers in assessing and planning effective reading programs.

In addition to the materials provided in this booklet, other sources of standards for developing effective basic skills programs include:

> State standards of excellence for reading programs from your
> State Department of Education (Reading Program Director)
>
> Proficiency standards for State from your
> State Department of Education (Evaluation and/or Assessment
> Program Director)
>
> Back To The Basics?   INFOPAC No. 13
> from the National Education Association
> (A position paper written by Robert C. Snider)

Other professional organizations may have developed position papers on other aspects of effective basic skills program standards. Basic skills program developers may also find these helpful.

It is hoped that this information, coupled with your own basic skills research will assist you in developing a pedagogically sound program of basic skills improvement for all of the students in your school.

Shirley A. Jackson

Shirley A. Jackson

NATIONAL COUNCIL OF SUPERVISORS OF MATHEMATICS POSITION PAPER ON BASIC MATHEMATICAL SKILLS

INTRODUCTION

The currently popular slogan "Back to the Basics" has become a rallying cry of many who perceive a need for certain changes in education. The result is a trend that has gained considerable momentum and has initiated demands for programs and evaluations which emphasize narrowly defined skills.

Mathematics educators find themselves under considerable pressure from boards of education, legislatures, and citizens' groups who are demanding instructional programs which will guarantee acquisition of computational skills. Leaders in mathematics education have expressed a need for clarifying what are the basic skills needed by students who hope to participate successfully in adult society.

The narrow definition of basic skills which equates mathematical competence with computational ability has evolved as a result of several forces:

1. Declining scores on standardized achievement tests and college entrance examinations;
2. Reactions to the results of the National Assessment of Educational Progress;
3. Rising costs of education and increasing demands for accountability;
4. Shifting emphasis in mathematics education from curriculum content to instructional methods and alternatives;
5. Increased awareness of the need to provide remedial and compensatory programs;
6. The widespread publicity given to each of the above by the media.

This widespread publicity, in particular, has generated a call for action from governmental agencies, educational organizations, and community groups. In responding to these calls, the National Institute of Education adopted the area of basic skills as a major priority. This resulted in a Conference on Basic Mathematical Skills and Learning, held in Euclid, Ohio, in October, 1975.

The National Council of Supervisors of Mathematics (NCSM), during the 1976 Annual Meeting in Atlanta, Georgia, met in a special session to discuss the Euclid Conference Report. More than 100 members participating in that session expressed the need for a unified position on basic mathematical skills which would enable them to provide more effective leadership within their respective school systems, to give adequate rationale and direction in their tasks of implementing basic mathematics programs, and to appropriately expand the definition of basic skills. Hence, by an overwhelming majority, they mandated the NCSM to establish a task force to formulate a position on basic mathematical skills. This statement is the result of that effort.

RATIONALE FOR THE EXPANDED DEFINITION

There are many reasons why basic skills must include more than computation. The present technological society requires daily use of such skills as estimating, problem solving, interpreting data, organizing data, measuring, predicting, and applying mathematics to everyday situations. The changing needs of society, the explosion of the amount of quantitative data, and the availability of computers and calculators demand a redefining of the priorities for basic mathematics skills. In recognition of the inadequacy of computation alone, NCSM is going on record as providing both a general list of basic mathematical skills and a clarification of the need for such an expanded definition of basic skills.

Any list of basic skills must include computation. However, the role of computational skills in mathematics must be seen in the light of the contributions they make to one's ability to use mathematics in everyday living. In isolation, computational skills contribute little to one's ability to participate in mainstream society. Combined effectively with the other skill areas, they provide the learner with the basic mathematical ability needed by adults.

DEFINING BASIC SKILLS

The NCSM views basic mathematical skills as falling under ten vital areas. The ten skill areas are interrelated and many overlap with each other and with other disciplines. All are basic to pupils' development of the ability to reason effectively in varied situations.

This expanded list is presented with the conviction that mathematics education must not emphasize computational skills to the neglect of other critical areas of mathematics. The ten components of basic mathematical skills are listed below, but the order of their listing should not be interpreted as indicating either a priority of importance or a sequence for teaching and learning.

Furthermore, as society changes our ideas about which skills are basic also change. For example, today our students should learn to measure in both the customary and metric systems, but in the future the significance of the customary system will be mostly historical. There will also be increasing emphasis on when and how to use hand-held calculators and other electronic devices in mathematics.

TEN BASIC SKILL AREAS

Problem Solving

Learning to solve problems is the principal reason for studying mathematics. Problem solving is the process of applying previously acquired knowledge to new and unfamiliar situations. Solving word problems in texts is one form of problem solving, but students also should be faced with non-textbook problems. Problem-solving strategies involve posing questions, analyzing situations, translating results, illustrating results, drawing diagrams, and using trial and error. In solving problems, students need to be able to apply the rules of logic necessary to arrive at valid conclusions. They must be able to determine which facts are relevant. They should be unfearful of arriving at tentative conclusions and they must be willing to subject these conclusions to scrutiny.

Applying Mathematics to Everyday Situations

The use of mathematics is interrelated with all computation activities. Students should be encouraged to take everyday situations, translate them into mathematical expressions, solve the mathematics, and interpret the results in light of the initial situation.

Alertness to the Reasonableness of Results

Due to arithmetic errors or other mistakes, results of mathematical work are sometimes wrong. Students should learn to inspect all results and to check for reasonableness in terms of the original problem. With the increase in the use of calculating devices in society, this skill is essential.

Estimation and Approximation

Students should be able to carry out rapid approximate calculations by first rounding off numbers. They should acquire some simple techniques for estimating quantity, length, distance, weight, etc. It is also necessary to decide when a particular result is precise enough for the purpose at hand.

Appropriate Computational Skills

Students should gain facility with addition, subtraction, multiplication, and division with whole numbers and decimals. Today it must be recognized that long, complicated computations will usually be done with a calculator. Knowledge of single-digit number facts is essential and mental arithmetic is a valuable skill. Moreover, there are everyday situations which demand recognition of, and simple computation with, common fractions.

Because consumers continually deal with many situations that involve percentage, the ability to recognize and use percents should be developed and maintained.

Geometry

Students should learn the geometric concepts they will need to function effectively in the 3-dimensional world. They should have knowledge of concepts such as point, line, plane, parallel, and perpendicular. They should know basic properties of simple geometric figures, particularly those properties which relate to measurement and problem-solving skills. They also must be able to recognize similarities and differences among objects.

Measurement

As a minimum skill, students should be able to measure distance, weight, time, capacity, and temperature. Measurement of angles and calculations of simple areas and volumes are also essential. Students should be able to perform measurement in both metric and customary systems using the appropriate tools.

Reading, Interpreting, and Constructing Tables, Charts, and Graphs

Students should know how to read and draw conclusions from simple tables, maps, charts, and graphs. They should be able to condense numerical information into more manageable or meaningful terms by setting up simple tables, charts, and graphs.

Using Mathematics to Predict

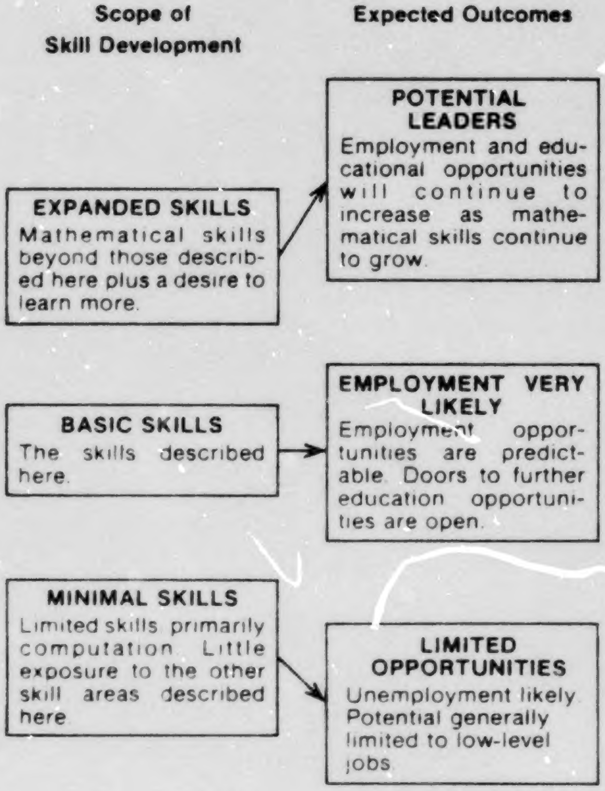
Students should learn how elementary notions of probability are used to determine the likelihood of future events. They should learn to identify situations where immediate past experience does not affect the likelihood of future events. They should become familiar with how mathematics is used to help make predictions such as election forecasts.

Computer Literacy

It is important for all citizens to understand what computers can and cannot do. Students should be aware of the many uses of computers in society, such as their use in teaching/learning, financial transactions, and information storage and retrieval. The "mystique" surrounding computers is disturbing and can put persons with no understanding of computers at a disadvantage. The increasing use of computers by government, industry, and business demands an awareness of computer uses and limitations.

BASIC SKILLS AND THE STUDENT'S FUTURE

Anyone adopting a definition of basic skills should consider the "door-opening/door-closing" implications of the list. The following diagram illustrates expected outcomes associated with various amounts of skill development.



Scope of Skill Development

Expected Outcomes

EXPANDED SKILLS
Mathematical skills beyond those described here plus a desire to learn more.

POTENTIAL LEADERS
Employment and educational opportunities will continue to increase as mathematical skills continue to grow.

BASIC SKILLS
The skills described here.

EMPLOYMENT VERY LIKELY
Employment opportunities are predictable. Doors to further education opportunities are open.

MINIMAL SKILLS
Limited skills primarily computation. Little exposure to the other skill areas described here.

LIMITED OPPORTUNITIES
Unemployment likely. Potential generally limited to low-level jobs.

MINIMUM ESSENTIALS FOR HIGH-SCHOOL GRADUATION

Today some school boards and state legislatures are starting to mandate mastery of minimum essential skills in reading and mathematics as a requirement for high-school graduation. In the process, they should consider the potential pitfalls of doing this without an appropriate definition of "basic skills." If the mathematics requirements are set inordinately high, then a significant number of students may not be able to graduate. On the other hand, if the mathematics requirements are set too low and mathematical skills are too narrowly defined, the result could be a sterile mathematics program concentrating exclusively on learning of low-level mathematical skills. This position paper neither recommends nor condemns minimal competencies for high-school graduation. However, the ten components of basic skills stated here can serve as guidelines for state and local school systems that are considering the establishment of minimum essential graduation requirements.

DEVELOPING THE BASIC SKILLS

One individual difference among students is style or way of learning. In offering opportunities to learn the basic skills, options must be provided to meet these varying learning styles. The present "back-to-basics" movement may lead to an emphasis on drill and practice as a way to learn.

Certainly drill and practice is a viable option, but it is only one of many possible ways to bring about learning and to create interest and motivation in students. Learning centers, contracts, tutorial sessions, individual and small-group projects, games, simulations and community-based activities are some of the other options that can provide the opportunity to learn basic skills. Furthermore, to help students fully understand basic mathematical concepts, teachers should utilize the full range of activities and materials available, including objects the students can actually handle.

The learning of basic mathematical skills is a continuing process which extends through all of the years a student is in school. In particular, a tendency to emphasize computation while neglecting the other nine skill areas at the elementary level must be avoided.

EVALUATING AND REPORTING STUDENT PROGRESS

Any systematic attempt to develop basic skills must necessarily be concerned with evaluating and reporting pupil progress.

In evaluation, test results are used to judge the effectiveness of the instructional process and to make needed adjustments in the curriculum and instruction for the individual student. In general, both educators and the public have accepted and emphasized an overuse of and overconfidence in the results of standardized tests. Standardized tests yield comparisons between students and can provide a rank ordering of individuals, schools, or districts. However, standardized tests have several limitations including the following:

a. Items are not necessarily generated to measure a specific objective or instructional aim.
b. The tests measure only a sample of the content that makes up a program; certain outcomes are not measured at all.

Because they do not supply sufficient information about how much mathematics a student knows, standardized tests are not the best instruments available for reporting individual pupil growth. Other alternatives such as criterion tests or competency tests must be considered. In criterion tests, items are generated which measure the specific objectives of the program and which establish the student's level of mastery of these objectives. Competency tests are designed to determine if the individual has mastered the skills necessary for a certain purpose such as entry into the job market. There is also need for open-ended assessments such as observations, interviews, and manipulative tasks to assess skills which paper and pencil tests do not measure adequately.

Reports of pupil progress will surely be made. But, while standardized tests will probably continue to dominate the testing scene for several years, there is an urgent need to begin reporting pupil progress in other terms, such as criterion tests and competency measures. This will also demand an immediate and extensive program of inservice education to instruct the general public on the meaning and interpretation of such data and to enable teachers to use testing as a vital part of the instructional process.

Large scale testing, whether involving all students or a random sample, can result in interpretations which have great influence on curriculum revisions and development. Test results can indicate, for example, that a particular mathematical topic is being taught at the wrong time in the student's development and that it might better be introduced later or earlier in the curriculum. Or, the results might indicate that students are confused about some topic as a result of inappropriate teaching procedures. In any case, test results should be carefully examined by educators with special skills in the area of curriculum development.

CONCLUSION

The present paper represents a preliminary attempt by the National Council of Supervisors of Mathematics to clarify and communicate its position on basic mathematical skills. The NCSM position establishes a framework within which decisions on program planning and implementation can be made. It also sets forth the underlying rationale for identifying and developing basic skills and for evaluating pupils' acquisition of these competencies. The NCSM position underscores the fundamental belief of the National Council of Supervisors of Mathematics that any effective program of basic mathematical skills must be directed not "back" but *forward* to the essential needs of adults in the present and future.

You are encouraged to make and distribute copies of this paper.

NATIONAL COUNCIL OF SUPERVISORS OF MATHEMATICS
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January, 1977

MEMBERS OF NCSM TASK FORCE ON BASIC MATHEMATICAL SKILLS

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[2] NCSM Basic Skills Task Force Chairperson

[3] President, NCSM

[4] Resource Person, National Institute of Education

REPORT OF THE KANSAS CITY COORDINATING CONFERENCE (KC^3)

The following concerns for consideration by the Office of Education were identified at a conference in Kansas City on October 11 and 12, 1978, involving the following persons representing the following mathematics education organizations:

Shirley Hill, President, National Council of Teachers of Mathematics
Joe Crosswhite, National Council of Teachers of Mathematics
Dorothy Strong, President, National Council of Supervisors of Mathematics
Ross Taylor, National Council of Supervisors of Mathematics
Clare Nesmith*, Association of State Supervisors of Mathematics
David Dye, Association of State Supervisors of Mathematics
Liz Williams, Facilitator, Lesley College

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*Conference Chairperson

The focus at the Office of Education is changing from concentration on reading to an emphasis on the basic skills of language and mathematics. At this time, we welcome this opportunity to provide input to the Office of Education on behalf of the mathematics education community. With the inclusion of mathematics in the Office of Education basic skills program, we feel that the Office of Education needs to establish positions for mathematics education specialists to work in its basic skills program; these positions should be filled as soon as possible.

Some Concerns of Mathematics Educators about the Process of Developing State Plans for Basic Skills

1. Mathematics, instead of just computation, should be stressed throughout the plan. All ten basic mathematical skill areas listed in the National Council of Supervisors Position Paper on Basic Mathematical Skills should be emphasized.
2. The planning process should provide for sufficient opportunity for input by teachers of mathematics. The process should explicitly call for the involvement of mathematics specialists (particularly local supervisors and state supervisors as well as teachers and college mathematics educators) in a significant way at every stage of the planning and implementation.

3. The involvement of state and local professional mathematics education organizations affiliated with the National Council of Teachers of Mathematics should be explicitly called for throughout the planning process.

4. Concern for student competency in basic skills comes from the public. Professional expertise in basic skills instruction must come from specialists in mathematics, reading and writing. Therefore, the planning process must involve representatives from both the community and the professional specialists.

5. All states must have specialists in mathematics at the state level. In addition, all teachers and school districts should have the services of mathematics specialists more directly available to them.

6. Local involvement should come early in the state planning process to insure sufficient flexibility to allow for adaptability to various local situations.

7. Differences among urban, rural and suburban settings should be sufficiently considered in the planning. In particular, there is a great difference between situations where there is an existing curriculum support structure and situations where there is none.

8. The basic skills program should build on existing support structures rather than establishing competing ones.

9. In the immediate future, mathematics will need special extra attention in the state basic skills plans because the states are moving from a reading emphasis to a basic skills emphasis which involves mathematics.

10. The plan should contain a section which focuses on teaching and learning. This section should emphasize how the planning and public relations can serve the improvement of the learning of basic skills.

11. Procedures for assessing the mathematical needs of a population should be developed and refined.

12. In situations where former state or local right-to-read directors become basic skills coordinators, special precautions will be necessary to insure that mathematics instruction receives the proper attention.

13. The basic skills plan should provide for the coordination of basic skills instruction

in various programs such as Title I, special education, community education, bilingual education and the locally funded programs. Conflicting or competing programs must be avoided.

14. Caution must be taken to insure that the emphasis on basic skills instruction does not limit opportunities for student learning in mathematics, language and the rest of the curriculum.

15. The basic skills program must be designed to bring about improved instruction in basic skills in the classrooms. It must avoid infusing another layer of bureaucracy with a possible counter-productive result.

16. Care must be taken to avoid placing an extra management burden on teachers. If the teachers are expected to do more testing and record keeping in addition to everything they are doing now, then they will have less time for instruction.

17. There must be sufficient recognition of the differences as well as the similarities in the learning of mathematics and the learning of language. For example, techniques that are successful for teaching reading do not automatically transfer to the teaching of mathematics.

18. The plan must provide a means of establishing priorities. For example, in the short range it may be necessary to concentrate efforts on immediate remediation in grades seven through twelve, but in the long run the greatest payoff may come from concentration in grades four through eight.

19. There is a need for criteria to determine whether or not a program should receive funding for instruction in basic skills. Programs that are only marginally involved in basic skills should not receive funds targeted for basic skills instruction.

Issues and Problems in the Teaching and Learning of Basic Mathematical Skills

Issues and problems in the teaching and learning of basic mathematical skills can be considered in three categories relating to students, to teachers and to institutions. We shall consider these three categories in the order of their importance, beginning with students.

Issues and Problems Concerning Students

Mathematics concept development in children should proceed from *physical* model to *representational* to *abstract*. Development of basic skill foundations must take this into consideration. Mathematics language development is a gradual process involving describing and recording as one goes through the various stages.

We need to amass and utilize *existing information* about how students can most effectively learn basic mathematics skills.

We need to develop and utilize effective means of *involving parents* in the process of helping their children to learn mathematics. These programs can also be designed to help parents learn mathematics.

We need to emphasize the *relationship of language and mathematics*. Mathematics should not consist only of numbers. The use of language in learning mathematics is critical. Furthermore, students must learn to apply mathematics to the real world and that involves interrelating language and mathematics.

We need to concern ourselves with the affective aspects of mathematics. How can we help students overcome mathematics anxiety? How can we help students to want to learn mathematics? How can we help to increase the numbers of females, of minorities, and of students from poverty backgrounds who go on to study more advanced mathematics in high school and in college? Mathematics is a critical filter which determines the range of career and higher education opportunities available to a student.

We need to provide for individual differences. We must not have different expectations for different students because of sex, race, socio-economic status or other external factors. However, we must recognize that all students do not start at the same place, nor do they have the same external support.

Mobility of students, particularly urban students, can cause problems. These problems are more severe where the programs in the schools are dramatically different and where the needs of incoming students are not adequately determined.

Problems associated with the mainstreaming of special education students into regular classes must be addressed. Both the special students and the regular students must receive appropriate instruction in basic mathematical skills.

Basic skill development must relate concept development, skill building and problem solving. Student learning will be negatively affected if there is a failure to maintain a balance between these three components.

Issues and Problems Concerning Teachers

Of all of the factors related to successful instruction, the teacher is key. In order for a program of instruction to be successful, it must have teacher support. Therefore, it is essential that teachers be involved in program planning and development. Moreover, many of the best ideas for instruction come from creative teachers.

Teachers must be knowledgeable of the programs being taught and they must be able to relate to the students being taught. Therefore, the teachers must be provided with appropriate preservice and inservice training experiences.

There is a need for various inservice strategies for various segments of the teaching population. For example, many elementary teachers need to improve their knowledge of mathematics and how children learn mathematics. Many also need to overcome anxieties related to mathematics.

Secondary teachers usually have strong mathematics backgrounds, but they may lack skills necessary to teach basic mathematical skills to students who have not previously mastered them. With the widespread implementation of minimal competency programs, there is an urgent need to address this critical problem.

Appropriate levels and modes of staffing for effective instruction in basic skills is an issue of vital concern. We need to seek out the most cost effective organizational and staffing patterns for various subjects and various student populations. Furthermore, we must find means to insure that financial resources are made available to guarantee appropriate staffing for instruction of students with special needs in basic skills.

Teaching must not suffer because of the need for teachers to perform administrative management tasks. The use of teacher aides and of technology to lighten this burden should be explored.

Issues and Problems Concerning Institutions

There are critical curriculum research and development needs in mathematics in the area of basic skills, particularly at the secondary level. Currently, the schools are under pressure to produce competent high school graduates. To date, federal resources for basic skills have been concentrated at the elementary level--mostly in reading.

There is a need for a national clearinghouse to facilitate an exchange of information about local and state mathematics basic skills programs. We cannot afford to have everyone going out reinventing the wheel or making the same mistakes that have been made by others.

There is a need for a unified effort by all segments of the education population. This can probably be brought about internally better than externally. The key to this will be to devise strategies that convince each group that their concerns will be addressed from a stronger vantage point by combined effort. Curriculum support personnel at the state and local levels need to see themselves in a mutually reinforcing role.

The support of building and district line administrators is essential for effective instruction in basic skills.

Schools are presently in a bind between declining financial resources on the one hand and rising expectations for accountability on the other hand. At this time, there is a critical need to implement cost-effective programs of instruction in basic skills.

We need a systematic approach to skill development that does the following:

1. Identifies goals and objectives
2. Develops an evaluation strategy (including testing) that measures student achievement of these objectives
3. Develops and implements an instructional program
4. Makes changes in the program and in individual instruction as indicated necessary by the evaluation system

Existing commercially developed norm-referenced tests are not appropriate for these processes.

Some factors of concern about mathematics testing include

1. Potential cultural and sex bias
2. Issues of locus of control of testing (local, state, national)
3. The issue of secrecy that surrounds standardized testing
   (Are students being kept in the dark about what they are supposed to know?)
4. Potential curriculum stagnation as a result of testing

There should be support for mathematics programs in local communities that will serve as an extension of mathematics programs in regular schools. For example, prototypes of facilities and programs that are available through private and non-educational institutions that support reading instruction should be encouraged.

Conclusion

We believe that the concerns and ideas that we have stated here will prove useful as the Office of Education proceeds to incorporate mathematics into its basic skills program. The opportunity for representatives from the National Council of Teachers of Mathematics, the National Council of Supervisors of Mathematics and the Association of State Supervisors of Mathematics to gather and provide this input makes us optimistic for the future of the national basic skills effort and the role that mathematics will play in that effort.

We have begun to establish effective communication between the mathematics education profession and the basic skills component of the Office of Education. We shall explore how this communication can be facilitated by the officers, the committees, the publications, the meetings and the affiliated groups of the National Council of Teachers of Mathematics, the National Council of Supervisors of Mathematics and the Association of State Supervisors of Mathematics. We feel that the communication process will be greatly facilitated when the Office of Education hires specialists in mathematics education to work in its basic skills effort.

Respectfully submitted,

Ross Taylor, KC^3 Recorder

RT:il
October 16, 1978

March 1979

The National Council of Teachers of English

STANDARDS FOR BASIC SKILLS WRITING PROGRAMS

The following standards were developed by a specially selected committee of teachers, supervisors, and writing specialists for use by states and school districts establishing comprehensive literacy plans. The National Council of Teachers of English urges study of these standards as a means of determining that plans attend not only to effective practice within the classroom but also to the environment of support for writing instruction throughout the school and the community. If effective instruction in writing is to be achieved, all the standards need to be studied and provided for in shaping comprehensive literacy plans.

At a time of growing concern for the quality of writing in the society, it is important to take the most effective approaches to quality in school writing programs. These standards will help states and school districts assure that efforts to be undertaken will indeed lead to improvement.

Planners must begin with an adequate conception of what writing is. To serve this purpose, we offer the following:

Operational Definition of Writing

> Writing is the process of selecting, combining, arranging and developing ideas in effective sentences, paragraphs, and, often, longer units of discourse. The process requires the writer to cope with a number of variables: *method of development* (narrating, explaining, describing, reporting and persuading); *tone* (from very personal to quite formal); *form* (from a limerick to a formal letter to a long research report); *purpose* (from discovering and expressing personal feelings and values to conducting the impersonal "business" of everyday life); *possible audiences* (oneself, classmates, a teacher, "the world"). Learning to write and to write increasingly well involves developing increasing skill and sensitivity in selecting from and combining these variables to shape particular messages. It also involves learning to conform to conventions of the printed language, appropriate to the age of the writer and to the form, purpose and tone of the message.
>
> Beyond the pragmatic purpose of shaping messages to others, writing can be a means of self-discovery, of finding out what we believe, know, and cannot find words or circumstances to say to others. Writing can be a deeply personal act of shaping our perception of the world and our relationships to people and things in that world. Thus, writing serves both public and personal needs of students, and it warrants the full, generous and continuing effort of all teachers.

NCTE
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STANDARDS FOR BASIC SKILLS WRITING PROGRAMS

An effective basic skills program in writing has the following characteristics:

TEACHING AND LEARNING

1. There is evidence that knowledge of current theory and research in writing has been sought and applied in developing the writing program.
2. Writing instruction is a substantial and clearly identified part of an integrated English language arts curriculum.
3. Writing is called for in other subject matters across the curriculum.
4. The subject matter of writing has its richest source in the students' personal, social, and academic interests and experiences.
5. Students write in many forms (e.g., essays, notes, summaries, poems, letters, stories, reports, scripts, journals).
6. Students write for a variety of audiences (e.g., self, classmates, the community, the teacher) to learn that approaches vary as audiences vary.
7. Students write for a wide range of purposes (e.g., to inform, to persuade, to express the self, to explore, to clarify thinking).
8. Class time is devoted to all aspects of the writing process: generating ideas, drafting, revising, and editing.
9. All students receive instruction in both (a) developing and expressing ideas and (b) using the conventions of edited American English.
10. Control of the conventions of edited American English (supporting skills such as spelling, handwriting, punctuation, and grammatical usage) is developed primarily during the writing process and secondarily through related exercises.
11. Students receive constructive responses—from the teacher and from others—at various stages in the writing process.
12. Evaluation of individual writing growth:
    - (a) is based on complete pieces of writing;
    - (b) reflects informed judgments, first, about clarity and content and then about conventions of spelling, mechanics, and usage;
    - (c) includes regular responses to individual pieces of student writing as well as periodic assessment measuring growth over a period of time.

SUPPORT

13. Teachers with major responsibility for writing instruction receive continuing education reflecting current knowledge about the teaching of writing.
14. Teachers of other subjects receive information and training in ways to make use of and respond to writing in their classes.

15. Parent and community groups are informed about the writing program and about ways in which they can support it.

16. School and class schedules provide sufficient time to assure that the writing process is thoroughly pursued.

17. Teachers and students have access to and make regular use of a wide range of resources (e.g., library services, media, teaching materials, duplicating facilities, supplies) for support of the writing program.

PROGRAM EVALUATION

18. Evaluation of the writing program focuses on pre- and post-program sampling of complete pieces of writing, utilizing a recognized procedure (e.g., holistic rating, the Diederich scale, primary trait scoring) to arrive at reliable judgments about the quality of the program.

19. Evaluation of the program might also include assessment of a sample of student attitudes; gathering of pertinent quantitative data (e.g., frequency of student writing, time devoted to writing activities); and observational data (evidence of prewriting activities, class anthologies, writing folders, and student writing displays).

STANDARDS FOR EFFECTIVE ORAL COMMUNICATION PROGRAMS

Prepared by

American Speech-Language-Hearing Association
Speech-Communication Association

Adequate oral communication frequently determines an individual's educational, social and vocational success. Yet, American education has typically neglected formal instruction in the basic skills of speaking and listening. It is important that state and local education agencies implement the most effective oral communication programs possible.

The following standards for oral communication were developed by representatives of the Speech-Communication Association and the American Speech-Language-Hearing Association.

If effective oral communication programs are going to be developed all components of the recommended standards must be considered. Implementation of these standards will facilitate development of adequate and appropriate oral communication necessary for educational, social and vocational success.

DEFINITION

Oral Communication: the process of interacting through heard and spoken messages in a variety of situations.

Effective oral communication is a learned behavior, involving the following processes:

1. Speaking in a variety of educational and social situations: Speaking involves but is not limited to arranging and producing messages through the use of voice, articulation, vocabulary, syntax and non-verbal cues (e.g., gesture, facial expression, vocal cues) appropriate to the speaker and listeners.

2. Listening in a variety of educational and social situations: Listening involves, but is not limited to hearing, perceiving, discriminating, interpreting, synthesizing, evaluating, organizing and remembering information from verbal and non-verbal messages.

BASIC ASSUMPTIONS

1. Oral communication behaviors of students can be improved through direct instruction.
2. Oral communication instruction emphasizes the interactive nature of speaking and listening.
3. Oral communication instruction addresses the everyday communication needs of students and includes emphasis on the classroom as a practical communication environment.
4. There is a wide range of communication competence among speakers of the same language.
5. Communication competence is not dependent upon use of a particular form of language.
6. A primary goal of oral communication instruction is to increase the students' repertoire and use of effective speaking and listening behaviors.
7. Oral communication programs provide instruction based on a coordinated developmental continuum of skills, preschool through adult.
8. Oral communication skills can be enhanced by using parents, supportive personnel, and appropriate instructional technology.

AN EFFECTIVE ORAL COMMUNICATION PROGRAM HAS THE FOLLOWING CHARACTERISTICS:

TEACHING/LEARNING

1. The oral communication program is based on current theory and research in speech and language development, psycholinguistics, rhetorical and communication theory, communication disorders, speech science, and related fields of study.
2. Oral communication instruction is a clearly identifiable part of the curriculum.
3. Oral communication instruction is systematically related to reading and writing instruction and to instruction in the various content areas.

4. The relevant academic, personal and social experiences of students provide core subject matter for the oral communication program.

5. Oral communication instruction provides a wide range of speaking and listening experiences, in order to develop effective communication skills appropriate to:

   a. a range of situations; e.g., informal to formal, interpersonal to mass communication.

   b. a range of purposes; e.g., informing, learning, persuading, evaluating messages, facilitating social interaction, sharing feelings, imaginative and creative expression.

   c. a range of audiences; e.g., classmates, teachers, peers, employers, family, community.

   d. a range of communication forms; e.g., conversation, group discussion, interview, drama, debate, public speaking, oral interpretation.

   e. a range of speaking styles; e.g. impromptu, extemporaneous, and reading from manuscript.

6. The oral communication program provides class time for systematic instruction in oral communication skills, e.g., critical listening, selecting, arranging and presenting messages, giving and receiving constructive feedback, non-verbal communication.

7. The oral communication program includes development of adequate and appropriate language, articulation, voice, fluency and listening skills necessary for success in educational career, and social situations through regular classroom instruction, co-curricular activities, and speech-language pathology and audiology services.

8. Oral communication program instruction encourages and provides appropriate opportunities for the reticent student (e.g., one who is excessively fearful in speaking situations) to participate more effectively in oral communication.

SUPPORT

1. Oral communication instruction is provided by individuals adequately trained in oral communication and/or communication disorders, as evidenced by appropriate certification.

2. Individuals responsible for oral communication instruction receive continuing education on theories, research and instruction relevant to communication.

3. Individuals responsible for oral communication instruction participate actively in conventions, meetings, publications, and other activities of communication professionals.

4. The oral communication program includes a system for training classroom teachers to identify and refer students who do not have adequate listening and speaking skills, or are reticent, to those qualified individuals who can best meet the needs of the student through further assessment and/or instruction.

5. Teachers in all curriculum areas receive information on appropriate methods for, a) using oral communication to facilitate instruction, and b) using the subject matter to improve students' oral communication skills.

6. Teachers in all curriculum areas receive education and training to develop effective communication environments in their classrooms.

7. Parent and community groups are informed about and provided with appropriate materials for effective involvement in the oral communication program.

8. The oral communication program is facilitated by availability and use of appropriate instructional materials, equipment and facilities.

ASSESSMENT AND EVALUATION

1. The oral communication program is based on a school-wide assessment of the speaking and listening needs of students.

2. Speaking and listening needs of students will be determined by qualified personnel utilizing appropriate evaluation tools for the skills to be assessed, and educational levels of students being assessed.

3. Evaluation of student progress in oral communication is based upon a variety of data including observations, self-evaluations, listeners' responses to messages, and formal tests.

4. Evaluation of students' oral communication encourages, rather than discourages students' desires to communicate, by emphasizing those behaviors which students can improve, thus enhancing their ability to do so.

5. Evaluation of the total oral communication program is based on achievement of acceptable levels of oral communication skill determined by continuous monitoring of student progress in speaking and listening, use of standardized and criterion-referenced tests, audience-based rating scales, and other appropriate instruments.

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GUIDELINES FOR THE PROFESSIONAL PREPARATION OF READING TEACHERS

Developed by the
Professional Standards and Ethics Committee
of the
International Reading Association
May 1978

INTRODUCTION

Reading skills are required by children and adults for success in all educational and in most social and vocational endeavors. All educators are involved in teaching or reinforcing reading skills and in promoting the uses of reading related to their fields and levels of instruction. Therefore all teachers, as well as reading personnel, should be prepared in reading education as it relates to their particular roles, as well as in specific attitudes, concepts, and skills.

Titles used for persons in Roles 1-7 vary widely; e.g., the person in Role 4 may be called reading consultant, reading coordinator, reading supervisor, or reading resource person. For this reason, attitudes, concepts, and skills in this document are related to roles rather than to titles. Furthermore, many persons in reading education are responsible for more than one role. The International Reading Association recommends that every person attain the attitudes, concepts, and skills needed for all assigned roles.

The list of attitudes, concepts, and skills is intended to provide the basis for:

- certification of reading personnel
- development of college and university programs in reading education
- approval of college and university programs in reading education
- assessment of qualifications of persons seeking employment in any of the seven roles
- self-assessment of persons in reading education
- evaluation of the performance of persons assigned to any of the seven roles

GENERAL ACADEMIC PREPARATION

All persons in reading education should have the following:

I. A bachelor's degree plus additional study and/or experience as needed to develop the attitudes, concepts, and skills itemized below.

II. Preparation in foundation courses such as developmental psychology, educational psychology, educational measurement, and learning theory.

III. Preparation as consumers and/or producers of research as appropriate for the role.

IV. Completion of a sequence of professional experiences which includes early and continuous involvement with student learners.

SPECIFIC ACADEMIC PREPARATION

Two general approaches to teacher preparation are currently in use: 1) modules based on sequences of attitudes, concepts, and skills to be attained and 2) credit hour courses. Often these approaches need to be equated. This can be done by studying course content to ascertain that all essential attitudes, concepts, and skills are dealt with in at least one course.

The terminology used here is that of the institutions of the United States. It must be adapted for those in other countries. For the purpose of this document, one semester hour is approximately 15 clock hours of instruction.

To assist those institutions and certifying agencies that use the credit hour approach, the following hours of preparation in reading education (graduate and/or undergraduate) are recommended:

Role 1 (teaching readiness and developmental reading at pre-kindergarten, kindergarten, and primary levels) 6-9 semester hours, to include preparation in the following areas: developmental reading instruction including diagnostic teaching, children's literature, language development, language arts instruction.

Role 2 (teaching developmental and content area reading beyond the primary level) 6-9 semester hours, to include preparation in the following areas: developmental reading instruction including diagnostic teaching, language arts instruction, reading in the content areas, literature for children/youth/reading-handicapped adults.

Role 3 (teaching clinical/remedial reading) 15-21 hours at the graduate level, to include the following areas: developmental reading instruction, language arts instruction, foundations of language development, diagnosis of reading difficulties, techniques of remediation of reading problems, literature for children/youth/reading-handicapped adults, reading in the content areas, a practicum in clinical/remedial instruction and supervision.

Role 4 (providing consultant service in reading instruction to school personnel) 21-27 semester hours at the graduate level, to include preparation in the following areas: developmental reading instruction, foundations of language development, language arts instruction, diagnosis of reading difficulties, techniques of remediation of reading problems, literature for children/youth/reading-handicapped adults, reading in the content areas, a practicum in clinical/remedial instruction, research in reading, leadership for instructional change, a practicum/internship in consulting and supervision.

Role 5 (directing/supervising systemwide reading programs) 27-36 semester hours at the graduate level, to include preparation in courses covering the following areas: developmental reading instruction, foundations of language development, reading in the content areas, diagnosis of reading difficulties, techniques of remediation of reading problems, literature for children/youth/reading-handicapped adults, research in reading, organizing/managing/evaluating a reading program, leadership for instructional change, curriculum development, a practicum/internship in reading program development and supervision.

Role 6 (preparing candidates for Roles 1 and 2) masters degree in reading plus a minimum of 30 credit hours with emphasis in reading including preparation and experience appropriate to courses taught.

Role 7 (preparing candidates for Roles 3, 4, 5, 6) a doctorate with emphasis in reading education including preparation and experience appropriate to courses taught.

It is further recommended that all persons entering Roles 3, 4, 5, 6, and 7 have at least three years of experience in reading or language arts as classroom teachers in an elementary or secondary school.

SPECIFIC ATTITUDES, CONCEPTS, AND SKILLS

1 Primary teaching
2 Post-primary teaching
3 Clinical/remedial
4 Consultative
5 Directive/Supervisory
6 Teacher training
7 Specialized training

A Attitudes C Concepts S Skills

More than half of these attitudes, concepts, and skills apply to all persons in reading education. Varying levels or degrees of attainment must be expected of persons in varying roles.

Certain of the capabilities listed below are cognitive (C) and can be measured through exams, papers, etc.; others are affective (A) and can be measured through extended observation and/or discussion; others are performance oriented (S) and can be adequately measured only in practicum situations.

I. Language Foundations for Reading								
A. The English language as a communication system								
1. Understands the concept of language as a symbol system for transmitting ideas, information, and feelings	C	1	2	3	4	5	6	7
2. Understands phonemic structure, morphemic structure, semantics, syntactic and intonation patterns	C	1	2	3	4	5	6	7
3. Understands the historical development and the patterns of change in the English language	C						6	7
4. Respects linguistic differences as they relate to sociocultural and economic environment	A	1	2	3	4	5	6	7
5. Understands American English dialects and usage styles	C	1	2	3	4	5	6	7
6. Understands major theories concerned with the processes of language use, especially the process of reading, and the nature of language acquisition	C	1	2	3	4	5	6	7
B. Language development								
1. Understands the principles and stages of physical, socioemotional, and intellectual development	C	1	2	3	4	5	6	7
2. Understands the importance of oral language development as a foundation for beginning reading instruction	C	1		3	4	5	6	7
3. Understands the relationship between continuous language development and readiness for reading achievement at any level	C	1	2	3	4	5	6	7
4. Helps students to develop prereading skills	S	1		3	4	5	6	7
5. Stresses language development in all instructional activities, including play and dramatic experiences	S	1	2	3	4	5	6	7
6. Provides students with experiences for developing, extending, and enriching listening, speaking, and writing skills and relating them to reading	S	1	2	3	4	5	6	7
II. Comprehension								
A. Literal and interpretive comprehension								
1. Develops a functional understanding of comprehension processes	C	1	2	3	4	5	6	7
2. Teaches the tasks of literal and interpretive comprehension	S	1	2	3	4	5	6	7
3. Teaches meaning signals given through language structure and patterns: sentence patterns, punctuation clues, paragraph structures, styles of discourse (narrative, descriptive, expository, argumentative)	S	1	2	3	4	5	6	7
4. Integrates teaching of literal and interpretive comprehension skills with the teaching of the subject matter in the content areas	S	1	2	3	4	5	6	7
5. Teaches meanings of words by developing understanding of context clues, structural clues, figurative language, idiom, and use of dictionary	S	1	2	3	4	5	6	7
6. Teaches students to apply literal and interpretative comprehension skills to materials and tasks of everyday life	S	1	2	3	4	5	6	7
B. Critical comprehension								
1. Develops a functional understanding of the nature of critical comprehension	C	1	2	3	4	5	6	7
2. Teaches students to evaluate material in terms of its recency, accuracy, adequacy, and relevancy	S		2	3	4	5	6	7
3. Teaches students to analyze the logic of statements and to understand the impact of propaganda techniques	S		2	3	4	5	6	7
4. Teaches students to distinguish between reality and fantasy, fact and opinion	S	1	2	3	4	5	6	7
5. Uses varied questioning strategies for developing thinking/reading skills	S	1	2	3	4	5	6	7
C. Reference and study skills								
1. Teaches students to set specific purposes for their reading	S	1	2	3	4	5	6	7
2. Teaches students to use the study aids in books: table of contents, glossary, index, footnotes, appendices, headings, questions	S	1	2	3	4	5	6	7
3. Teaches students to locate materials in a media center/library	S	1	2	3	4	5	6	7
4. Teaches students to prepare and use bibliographies	S		2	3	4	5	6	7
5. Teaches students to use reference materials	S		2	3	4	5	6	7
6. Teaches students to summarize, outline, take notes, and combine information from a number of sources	S		2	3	4	5	6	7
7. Teaches students to vary reading rate according to purpose for reading and difficulty of material	S		2	3	4	5	6	7
8. Teaches students to use an independent study method such as SQ3R	S		2	3	4	5	6	7
III. Word Analysis								
1. Demonstrates an understanding of the interrelatedness of word analysis skills and comprehension skills and of the limitations of word analysis in isolation	C	1	2	3	4	5	6	7
2. Understands that a variety of word analysis strategies is required to meet the needs of individual learners	C	1	2	3	4	5	6	7
3. Understands the differences in procedures for teaching word analysis among the various approaches to reading instruction	C	1	2	3	4	5	6	7

SPECIFIC ATTITUDES, CONCEPTS, AND SKILLS

1 Primary teaching
2 Post-primary teaching
3 Clinical/remedial
4 Consultative
5 Directive/Supervisory
6 Teacher training
7 Specialized training

A Attitudes C Concepts S Skills

		1	2	3	4	5	6	7
4. Teaches a) whole-word recognition, b) phoneme-grapheme relationships, c) use of context in conjunction with other clues, d) structural analysis, e) synthesis of phonemic and structural elements, and f) dictionary usage	S	1	2	3	4	5	6	7
5. Conducts a variety of individualized and group activities to stimulate mastery of word analysis skills	S	1	2	3	4	5	6	7
IV. Enjoyment of Reading								
1. Believes that a reading program must strongly foster pleasure in the reading act as well as skill mastery	A	1	2	3	4	5	6	7
2. Sets an example for students by reading extensively for pleasure and professional growth	A	1	2	3	4	5	6	7
3. Is familiar with appropriate materials for the enjoyment reading of students at the level taught	C	1	2	3	4	5	6	7
4. Is familiar with materials designed to appeal to the reading-handicapped learner	C	1	2	3	4	5	6	7
5. Encourages maximum use of the library	S	1	2	3	4	5	6	7
6. Creates an environment that stimulates the desire to learn to read and to continue reading	S	1	2	3	4	5	6	7
7. Assesses, records, and expands students' interests in reading	S	1	2	3	4	5	6	7
8. Tells stories and reads orally in an effective manner	S	1	2	3	4	5	6	7
9. Involves students in creative experiences such as dramatics, puppetry, and choral reading which enhance the enjoyment of literature	S	1	2	3	4	5	6	7
10. Plans creative experiences in literature to develop awareness of the writer's craft	S	1	2	3	4	5	6	7
11. Directs students to books which help them meet personal needs	S	1	2	3	4	5	6	7
12. Promotes the reading of library materials related to the content areas	S		2	3	4	5	6	7
13. Arranges sharing experiences in which students stimulate each other to read for enjoyment	S	1	2	3	4	5	6	7
V. Diagnostic Teaching								
A. Diagnostic evaluation								
1. Regards diagnosis as an ongoing process, not a one-time activity	A	1	2	3	4	5	6	7
2. Uses observational techniques and administers, scores, and interprets both norm-referenced and criterion-referenced tests to assess readiness for reading instruction	S	1		3	4	5	6	7
3. Uses observational techniques and administers, scores, and interprets both norm-referenced and criterion-referenced tests to assess reading ability at each level of reading achievement	S	1	2	3	4	5	6	7
4. Uses observational techniques and administers, scores, and interprets both norm-referenced and criterion-referenced tests to assess ability in skills necessary to read content area materials	S		2	3	4	5	6	7
5. Identifies patterns of behavior which might indicate physical, social, emotional, and/or intellectual impairments that may affect the student's progress in learning to read	S	1	2	3	4	5	6	7
6. Follows the appropriate procedures to refer students to agencies and individuals for in-depth diagnosis	S			3	4	5		7
7. Understands the various methods for estimating achievement level and their limitations	C	1	2	3	4	5	6	7
8. Identifies student interests in and attitudes toward reading	S	1	2	3	4	5	6	7
9. Understands the characteristics, strengths, and weaknesses of different types of measurement devices	C	1	2	3	4	5	6	7
10. Applies principles of test construction to the design and development and/or selection and use of instruments for diagnosis	S	1	2	3	4	5	6	7
11. Develops with physicians, psychologists, counselors, speech and hearing specialists, and other specialists case studies of students who have severe reading deficiencies	S			3	4	5		7
B. Organizing school and classroom for diagnostic teaching								
1. Subscribes to the concept of diagnostic teaching as it applies to every learner	A	1	2	3	4	5	6	7
2. Understands the extent of student variability in language aptitude, experience, and skills attainment	C	1	2	3	4	5	6	7
3. Forms and uses in the classroom several types of instructional groups: power (instructional level) groups for initial instruction, flexible specific skills reinforcement groups, interest/activity groups for personalized application of skills and for enjoyment	S	1	2	3	4	5	6	7
4. Differentiates instruction as indicated by assessment of students' individual backgrounds, personal adjustment, aptitude, interests, and achievement	S	1	2	3	4	5	6	7
5. Uses a variety of materials suitable for differentiating instruction at a number of difficulty levels and for students with varying needs	S	1	2	3	4	5	6	7
6. Systematically records the results of diagnostic assessment and the progress of individual students in the several aspects of reading development	S	1	2	3	4	5	6	7
7. Modifies instruction on the basis of information in student records	S	1	2	3	4	5	6	7
8. Uses differentiated instruction in the teaching of reading in the content areas	S		2	3	4	5	6	7
9. Develops and uses games and other activities appropriate for diagnostic teaching	S	1	2	3	4	5	6	7
C. Adapting instruction to needs of students with varied linguistic backgrounds								
1. Displays a positive attitude toward the ability of all students of whatever socioeconomic, cultural and linguistic background	A	1	2	3	4	5	6	7
2. Accepts and builds upon all of the students' divergent patterns of language in the early stages of transition to the language of instruction	A	1	2	3	4	5	6	7
3. Understands the difference between oral reading errors and those miscues which are the result of speech variations related to special linguistic backgrounds	C	1	2	3	4	5	6	7
4. Adapts instructional techniques to the needs of students with divergent dialects	S	1	2	3	4	5	6	7

SPECIFIC ATTITUDES, CONCEPTS, AND SKILLS

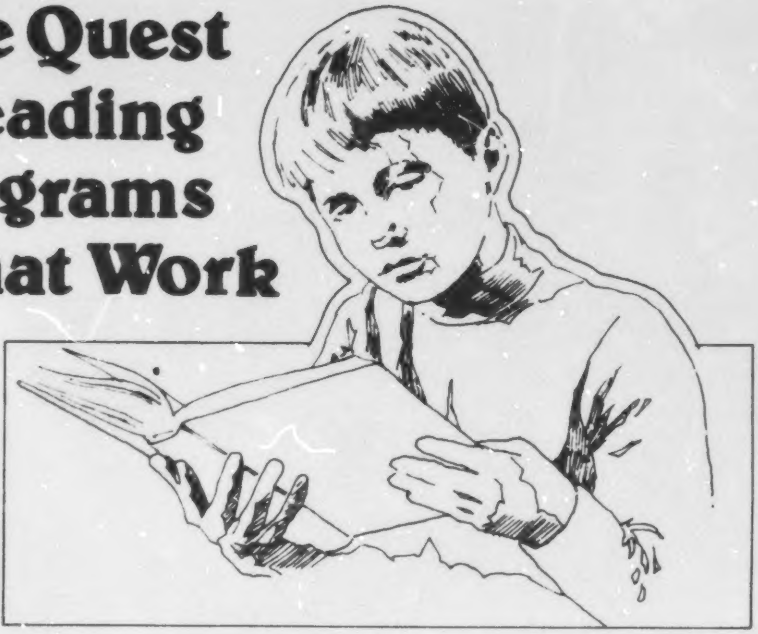
1 **Primary teaching**
2 **Post-primary teaching**
3 **Clinical/remedial**
4 **Consultative**
5 **Directive/Supervisory**
6 **Teacher training**
7 **Specialized training**

A Attitudes C Concepts S Skills

		1	2	3	4	5	6	7
D. Instruction of students with special reading needs								
1. Empathizes with reading-handicapped learners and their sensitivity to other persons' reactions to their deficiencies	A	1	2	3	4	5	6	7
2. Understands the nature and multiple causes of reading/learning disability	C			3	4	5	6	7
3. Selects and uses a variety of high interest materials and appropriate techniques for helping students with severe reading/learning difficulties	S			3	4	5		7
4. Uses appropriate techniques for teaching reading to the gifted and talented	S			3	4	5		7
5. Develops, equips, and operates special reading rooms, clinics, or other facilities to aid students with special reading needs	S			3	4	5		7
VI. Program Planning and Improvement								
A. Interaction with parents/community								
1. Understands the importance of involving administrators, teachers, parents, students, and the general public in the planning and development of a program	A	1	2	3	4	5	6	7
2. Knows the influence that social, economic, and cultural patterns have on language development	C	1	2	3	4	5	6	7
3. Obtains parental assistance in the home and in community activities which encourage student growth in reading	S	1	2	3	4	5	6	7
4. Interprets the reading/language program to the community	S	1	2	3	4	5	6	7
B. Instructional planning: curriculum and approaches								
1. Believes in superior reading instruction as a top priority in the educational system	A	1	2	3	4	5	6	7
2. Develops a program in reading that will accommodate the needs of all learners	S	1	2	3	4	5	6	7
3. Leads a community to develop a quality reading program within its financial capabilities	S					5		7
4. Values objectivity in judging differing approaches to reading instruction	A	1	2	3	4	5	6	7
5. Appreciates the concerns of content area teachers regarding problems they face in teaching reading as well as content	A			3	4	5	6	7
6. Uses techniques which interrelate skills and abilities of language development, word analysis, comprehension, flexibility of rate, study skills, and literary appreciation	S	1	2	3	4	5	6	7
7. Has broad familiarity with developmental, supplementary, nonprint, and library materials useful in teaching reading	C	1	2	3	4	5	6	7
8. Understands several instructional approaches, including group instruction in a developmental reading series, individualized self-selected reading, individualized systems-management approach, language experience approach	C	1	2	3	4	5	6	7
9. Organizes groups of students to provide the most efficient use of time available for reading instruction	S	1	2	3	4	5	6	7
10. Organizes groups of teachers in preservice and inservice education to provide the most efficient use of time for reading education	S				4	5	6	7
11. Uses processes involved in curriculum construction and revision	S				4	5	6	7
12. Plans for the integration of reading instruction with other elements of the curriculum	S				4	5		7
C. Initiating improvements								
1. Believes there are individual differences among adults just as there are among children and that this requires multiple approaches to the development of their professional growth	A				4	5	6	7
2. Is willing to counsel objectively with college students whose personality and/or ability precludes the likelihood of their success as teachers of reading	A						6	7
3. Uses a variety of professional resources in seeking solutions to instructional problems in reading and language development	S	1	2	3	4	5	6	7
4. Applies principles of adult psychology in analyzing problems of resistance to instructional change and in leading staff, either in groups or as individuals, around obstacles to progress	S				4	5		7
5. Conducts needs assessment/action research to determine program weaknesses	S				4	5		7
6. Participates in a needs assessment/action research to determine program needs	S	1	2	3	4	5	6	7
7. Works with staff to specify the objectives for a total program of reading instruction	S				4	5		7
8. Plans, conducts, and evaluates inservice programs in reading instruction	S				4	5		7
9. Conducts research in reading instruction	S				4	5	6	7
10. Plans and prepares materials such as bulletins, curriculum guides, journal articles, project analyses, and information releases	S				4	5	6	7
11. Coordinates activities of administrators, teachers, reading personnel, paraprofessionals, volunteers, and other concerned adults in operating an integrated, efficient, total reading program	S				4	5		7
12. Contributes to curriculum development, school personnel policies, and administrative policies related to reading instruction	S	1	2	3	4	5	6	7
13. Uses supervisory techniques appropriate to the task and personnel involved	S					5		7
14. Uses efficient budget procedures	S				4	5		7
15. Functions as a resource person with special knowledge of diagnostic teaching procedures	S			3	4			7
16. Uses effective procedures for evaluation of professional reading personnel	S					5		7
17. Uses effective procedures for evaluation of reading programs school or systemwide	S				4	5		7
18. Prepares statistical data	S					5		7
19. Joins and is active in organizations which stimulate professional growth	A	1	2	3	4	5	6	7

INTERNATIONAL READING ASSOCIATION, 800 BARKSDALE ROAD, PO BOX 8139, NEWARK, DELAWARE 19711 U.S.A.

The Quest for Reading Programs That Work



Shirley A. Jackson

Successful and widely adopted reading programs have similar characteristics which apparently contribute to their effectiveness.

What makes a reading program effective? The answer is becoming clearer as we seek to identify and provide information about successful practices.

A number of proven programs are listed in a catalogue published by the United States Office of Education called *Educational Programs That Work.*[1] Each of them must have been certified by a 22-member panel (half appointed by the Education Division of the Department of Health, Education and Welfare; half appointed by the National Institute of Education) as having met six criteria:

1. Did a change occur?
2. Was the effect consistent enough and observed enough to be statistically significant?
3. Was the effect educationally significant?
4. Can the intervention be implemented in another location with a reasonable expectation of comparable impact?
5. How likely is it that the observed effects resulted from the intervention?
6. Is the presented evidence believable and interpretable?[2]

In addition to being listed in *Educational Programs That Work*, programs approved by the joint review panel qualify for dissemination funds. These funds are available on a competitive basis to developers of programs who are willing to help another school system "adopt" and install their program. The objective is to transplant successful programs. Dissemination funds are also competitively available to persons who work as state facilitators, helping others become aware of the successful programs, and also assisting them in adopting these programs.

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[1] *Educational Programs That Work*, Volume 4. Washington, D.C.: U.S. Department of Health, Education and Welfare, Office of Education, Winter 1977.

[2] These criteria are explained in more detail in a publication called *Ideabook*. See: Kasten G. Tallmadge. *Ideabook*. Washington, D.C.: U.S. Department of Health, Education and Welfare, October 1977.

When developers of a program are successful in their request for certification by the joint review panel and in their competition for dissemination funds, they then face another kind of test: will other educators consider the program appropriate for use in their schools?

Among the programs that scored well on that test—those that have been most widely adopted and successfully implemented—are:

1. *Project Catch-up*, Newport Beach, California (139 adoptions; 32 states and two territories).
2. *Pegasus-Pace*, Tuscaloosa, Alabama (80 adoptions; 9 states).
3. *Reading, English Rotation Project*, Thomson, Georgia (60 adoptions; 11 states).
4. *New Adventures in Learning*, Tallahassee, Florida (59 adoptions; 6 states).
5. *School Volunteer Development Project*, Miami, Florida (53 adoptions; 14 states and Guam).
6. *Hosts Corporation*, Vancouver, Washington (50 adoptions; 10 states).
7. *Learning to Read by Reading*, Jamestown, California (42 adoptions; 10 states).
8. *Glassboro Right to Read*, Glassboro, New Jersey (31 adoptions; 4 states).
9. *Systems Directed Reading*, Richardson, Texas (23 adoptions; 23 states).
10. *Alphaphonics*, San Francisco, California (15 adoptions; 15 states).

When one analyzes these programs, certain characteristics appear repeatedly. These characteristics, which apparently are associated with effectiveness in reading instruction, are:

1. There is a structured curriculum with hierarchical sequencing stated in behavioral objectives with instructional activities, materials, and tests keyed to stated objectives.
2. The program is individualized to accommodate specific skills needs and varied learning patterns with a heavy focus on direct teaching of decoding skills.
3. Trained auxiliary support staff is used such as reading specialists, teacher aides, and parent volunteers. Structured, well-planned coordination exists between support staff and the regular teacher.
4. Grouping of students is accomplished through multiple methods.
5. There exists the belief that students can achieve, and the school environment is the responsible entity for assuring student achievement. Varied strategies are utilized to involve parents.
6. There are varied reinforcement and frequent repetition strategies.
7. There is positive and immediate reinforcement of instruction.
8. There is a cumulative, consistent, varied testing program.
9. There is structured and frequent monitoring of student progress.
10. There is a well-defined program articulation and pupil progress system.
11. Reading is interrelated with other basic skills.
12. A literature/reading enjoyment component is a part of the program.
13. Varied approaches to teaching reading are utilized with emphasis on diagnostic teaching.
14. At least 30 to 45 minutes a day is spent on teaching reading.
15. Staff development is directly related to instructional program planning, implementation, and evaluation.

> *". . . one thing seems certain. A successful reading program is not a static one, but one in a continuous state of change, growth, development, and refinement."*

It may appear from what I have said that comparing effectiveness of reading programs is a fairly clear-cut process. Of course, it is really not that simple. As we search for the most appropriate ways to determine how well particular programs are working, many problems and issues arise. I will mention only five.

1. Is a reading program automatically successful when almost all of its pupils are reading at or above grade level no matter what the preconditions are? Since by definition everybody cannot read at grade level, what is an acceptable measure of a program's "success?"

2. Is a reading program that is successful today necessarily considered successful in perpetuity? When is it no longer successful, and who declares it so?

3. Can a successful reading program actually be transplanted, intact, to an entirely different setting, situation, and population? How?

4. What is the relationship between socioeconomic status and growth potential? Should this relate to the criteria established for successful programs? Why or why not?

5. Is it important to emphasize program elements in the affective domain since one is unlikely to get a cognitive read-out on a "better adjusted" child? How does one definitively measure an improved self-concept? Is the focus on the affective domain a valid concern in structuring a successful reading program though most measures in these areas are imprecise and also will not translate into cognitive gains?

There may be many unanswered questions regarding how to structure successful reading programs. However, one thing seems certain. A successful reading program is not a static one, but one in a continuous state of change, growth, development, and refinement. Maybe, in light of this, there are no successful reading programs, only programs in a continuous quest for success.

Figure 1: Sample Information from *Educational Projects That Work*—Project: The Glassboro Right-to-Read Project

- Description

The Glassboro Right-to-Read Project is an individualized diagnostic/prescriptive reading program based on a district assessment of staff and community needs. The performance goal is to raise the reading level of pupils 1.5 years in an eight-month instructional period. Children are placed at their instructional reading level and given individualized teaching at that level. The project uses various forms of classroom organization to allow for flexibility and individualization.

- Materials used

The diagnostic battery includes criterion-referenced testing, a measure of potential, an informal reading inventory, a readiness measure, and a kindergarten screening. A variety of instructional materials are used. The project provides *A Guide to Program Planning*, *A Guide to Program Implementation*, and *Guess Who's Coming to School?*—a guide to parent and community involvement.

- Service available

Awareness materials are available; visitors are welcomed by appointment (schedule published in the fall); training is conducted at the project site (adopting site pays only their own costs); training is conducted out-of-state (exemplary project staff costs must be paid for); project staff may be able to attend out-of-state conferences (expenses must be paid).

- Descriptors

Diagnostic/Prescriptive Reading
Parent-Community Involvement
Staff Development
Needs Assessment

- Target audience

All students, pre-K through 3.

- Financial requirement

Start-up costs: $21.73 per learner per year if a reading specialist is hired; $5.73 per learner per year if a reading specialist is already under contract.

Maintenance: Reading specialist salary and/or substitute pay for release time unless otherwise provided.

- Program evaluation

First year of program implementation—2.14 years growth in an eight month instructional period.

Second year of program implementation—1.52 years growth in an eight-month instructional period.

- Contact: Dorothy E. Wriggins, Carpenter St. and Bowe Blvd., Glassboro, NJ 08028. USOE JDRP Approval: 9/18/74, JDRP Number: 74-93.

"THAT ALL MAY READ" -
Reading Program Assessment Scale

INTRODUCTION

The United States Commissioner of Education asked the Right to Read Office to develop a means to systematically examine existing reading programs or proposals for developing reading programs. This request reflected the need to:

- Help communities develop reading instruction programs that meet the needs of learners within those communities
- Provide a framework for examing the development of reading programs, but leaving freedom for tailoring instruction to local needs
- Provide a basis for consistent assessment of funded programs

Used in tandem with the Right to Read Planning and Assessment Materials, the Reading Program Assessment Scale provides a local community with a useful measure of their fidelity to the planning and assessment process. Viewed within the context of the planning and assessment charts, this scale might well have been entitled, "Maintaining Our Progress: Keeping the Faith."

Assessment is a delicate matter which should be approached with the knowledge that reading programs will and should often look somewhat different from each other because they are based on the needs of learners in a specific location at a particular point in time.

READING PROGRAM ASSESSMENT SCALE

I Planning and Management

	4	3	2	1
A. The program was derived from data on: 1. Deficits in pupil's performances				
2. A variety of instructional approaches and instructional techniques				
3. The way pupils were grouped				
4. The instructional materials				
5. The support personnel				
6. The physical facilities				
7. Pupil's dislike toward reading				
8. The existing diagnostic-prescriptive procedures				
9. The extent of community involvement				
10. An information control and communications component was provided and kept up-to-date for the program (e.g., the Status and Reporting Center Kit was displayed throughout the school year).				
B. The following people were involved in planning.				
1. Classroom teachers				
2. Parents and other concerned adults				
3. Principal, Director, other staff members				
4. School of district reading specialists				
5. Central office administration				

High Low

4 3 2 1

	4	3	2	1
C. The management included:				
1. A time-task allocation chart				
2. An itemized budget analysis				
3. Staff development in-service training				
Goals and Objectives				
A. A variety of interested persons had an opportunity to contribute to program goals.				
1. Teachers				
2. Principal/Director				
3. Parents				
4. The school or district reading specialist(s)				
5. Pupils				
6. Other staff members				
7. Community members				
B. A comprehensive set of goals and specific instructional objectives have been formulated.				
1. Outcome statements are derived from needs assessment findings.				
2. Accomplishment of performance objectives are absolutely essential to student reading score improvement.				
3. Accomplishment of process objectives are absolutely essential to student reading score improvement.				
4. The amount of time spent on any task in the program is directly related to the importance of its associated objectives.				

High			Low
4	3	2	1

	4	3	2	1
5. Projected outcomes and stated objectives adequately cover the cognitive areas essential to reading improvement (e.g., word recognition, comprehension, etc.).				
6. Projected outcomes and stated objectives adequately cover the affective areas essential to reading improvement (e.g., requesting additional reading materials, increased library participation decreased absenteeism, etc.).				
7. Objectives are evaluated on an interim basis (e.g., checked at designated times or intervals).				
8. Projected outcomes and stated objectives adequately cover the psychomotor area (e.g., manipulative and motor skills).				
III Instruction A. The following tasks are done by the staff: 1. Screening or diagnostic survey instruments are used to locate each pupil's major strengths and weaknesses in language and reading growth.				
2. Each pupil's program is designed to determine the best learning style for his difficulty, and learners are grouped differently for instruction in each skill area according to their varying levels of skill attainment and appreciation.				
3. Whole class instruction is used.				
4. Each pupil's attitude toward reading is gauged by observations and quizzes or assessments.				
5. Assessments are made as to whether speech and reading difficulties are caused by linguistic interference from another language or dialect.				

High			Low
4	3	2	1

	4	3	2	1
B. The staff provides instruction addressing language and reading skills in the following ways:				
1. Reading comprehension/word recognition				
2. Verbal expression (written/oral)				
C. The staff uses a variety of reading approaches.				
1. Meaning emphasis				
2. Linguistics				
3. Modified alphabet				
4. Language experience (building language skills from pupils' everyday experience)/ responsive environment				
5. Programmed learning				
6. Individualized reading				
D. The staff utilizes different methods and techniques for teaching reading.				
1. Programmed instruction is used.				
2. Instructional TV/taped listen-and-look techniques are used.				
3. Discussion groups, gaming/simulation are used.				
IV Staff				
A. Varying types of staff are used in support of the reading program.				
1. Professional classroom personnel (credentialed).				
2. The classroom teacher is assisted by a team teacher or specialist.				

High Low

4 3 2 1

	4	3	2	1
3. The classroom teacher is assisted by a paraprofessional aide.				
4. The classroom teacher is assisted by student aides or peer aides.				
5. The program is assisted by central office administrative/supervisory personnel.				
6. The program is assisted by special resource personnel (diagnostician, school psychologist, reading consultant, other specialists).				
B. Staff and support services personnel have instructional competence. 1. They are aware of different linguistic approaches to reading.				
2. They understand the development of early language and perceptual skills.				
3. They understand the varied instructional techniques.				
4. They understand the student with a special linguistic background.				
5. They understand the range of student attitudes toward school.				
6. They engage in joint educational planning to achieve performance objectives.				
7. They participate in activities that are geared toward professional growth (e.g., conferences, meetings, university/college classes, etc.).				

High Low
4 3 2 1

	4	3	2	1
V Staff Development The in-service education program is broadly conceived and continuously utilized. A. The majority of the staff participated in the development of the program.				
B. Outside consultants and technical assistants were used in the development of the program.				
C. The in-service program is task- and needs-oriented.				
D. The majority of the staff attends the in-service program activities.				
VI Materials and Facilities A. The educational setting is conducive to meeting stated objectives. 1. Space is available that is suitable for instructional and assessment activities by individuals, small groups, and large groups.				
2. There is adequate lighting in classroom and study areas.				
3. There are safeguards for the control of noise.				
4. Services are provided to remediate the physical factors that reduce the pupil's learning potential.				
B. The materials of instruction are varied and appropriate to the instructional objectives of the reading program as well as to the developmental needs of the learners. 1. Developmental reading instruction materials are used (basal and multi-level series, workbooks, tests, charts).				
2. Reading games, devices and programmed aids are used.				

High			Low
4	3	2	1

	4	3	2	1
3. Free, independent recreative reading materials are used (classroom library books and periodicals, school library books, periodicals, newspapers, supplementary books, paperbacks, etc.).				
4. Audio-visual instructional materials are used (films, filmstrips, TVs, tape recorders, radios).				
5. Teacher-made reading instructional aids are used (charts, bulletin boards, worksheets, illustrations, reading stations, etc.).				
6. The school library, classroom library, or multi-media center functions as an integral part of the reading instructional program, and services include materials for individualized, developmental, and remedial reading.				
VII Leadership Development A. The site administrator's knowledge and skills in leadership development for reading are being enlarged.				
1. Site visits are made to known exemplary programs.				
2. Special training seminars or workshops are attended.				
3. Personal study is made of reading programs.				
4. There is attendance at State, regional, or national reading conferences.				
5. Visits within the school are made during reading instruction.				

High			Low
4	3	2	1

	4	3	2	1
B. The reading specialist's knowledge and skills in leadership development for reading are being enlarged. 1. Site visits are made to known exemplary programs.				
2. Special training seminars or workshops are attended.				
3. Personal study is made of reading programs.				
4. College or university credits related to reading are being earned.				
5. There is attendance at State, regional, or national reading conferences.				
6. Visits within the school are made during reading instruction.				
7. Materials designed to improve effectiveness in staff development in reading are prepared and/or demonstrated.				
VIII Community Involvement Parents and the general community were involved with the following activities: A. needs assessment				
B. program planning				
C. program implementation				
D. program evaluation				
E. newsletter				
F. announcements by mass media				
G. special community meetings				
H. parent adult classroom visitations				
I. Community people were recruited as tutors or volunteer aides.				

High			Low
4	3	2	1

	4	3	2	1
J. Community people were involved in evaluation activities.				
K. Tutors or volunteer aides assisted with reading instruction.				
L. Training sessions were held for aides who work in the program.				
M. Community people served as interpreters or liaisons to community groups.				
IX Program Evaluation A. Evaluation of the reading program is being carried out as an ongoing function. 1. Written evaluation results are returned to teachers on a systematic basis.				
2. Teachers are provided assistance in interpreting evaluation data.				
3. In the evaluation, student actual outcomes were compared with intended outcomes (objectives).				
4. In the evaluation, actual teacher outcomes were compared with intended outcomes (objectives).				
5. The evaluation of program process objectives compared implemented processes with intended processes.				
6. The evaluation assessed the degree of both process and pre-existing variables that contributed to the program outcomes.				
7. Both technical and layman evaluation reports are disseminated to their perspective audiences.				

High			Low
4	3	2	1

	4	3	2	1
B. Information used in evaluation of pupil progress or program effectiveness comes from a variety of sources and techniques. 1. Classroom records are maintained for evaluation purposes.				
2. Teacher-developed tests and worksheet exercises are used.				
3. Standardized reading tests are used.				
4. Criterion-referenced tests are used.				
C. Reading evaluation includes an assessment of the extent to which pupils use the skills they possess (e.g., reports are kept on the number and types of literature read, based on information from teacher, librarian, pupil and/or parent).				
D. Teachers' competence in and attitudes toward reading instruction are assessed. 1. Measures of teacher attitudes are used.				
2. Measures of teacher competence in and knowledge of the teaching of reading are used.				

High Low

4 3 2 1

* FLOW CHART FOR PROGRAM ASSESSMENT AND PLANNING

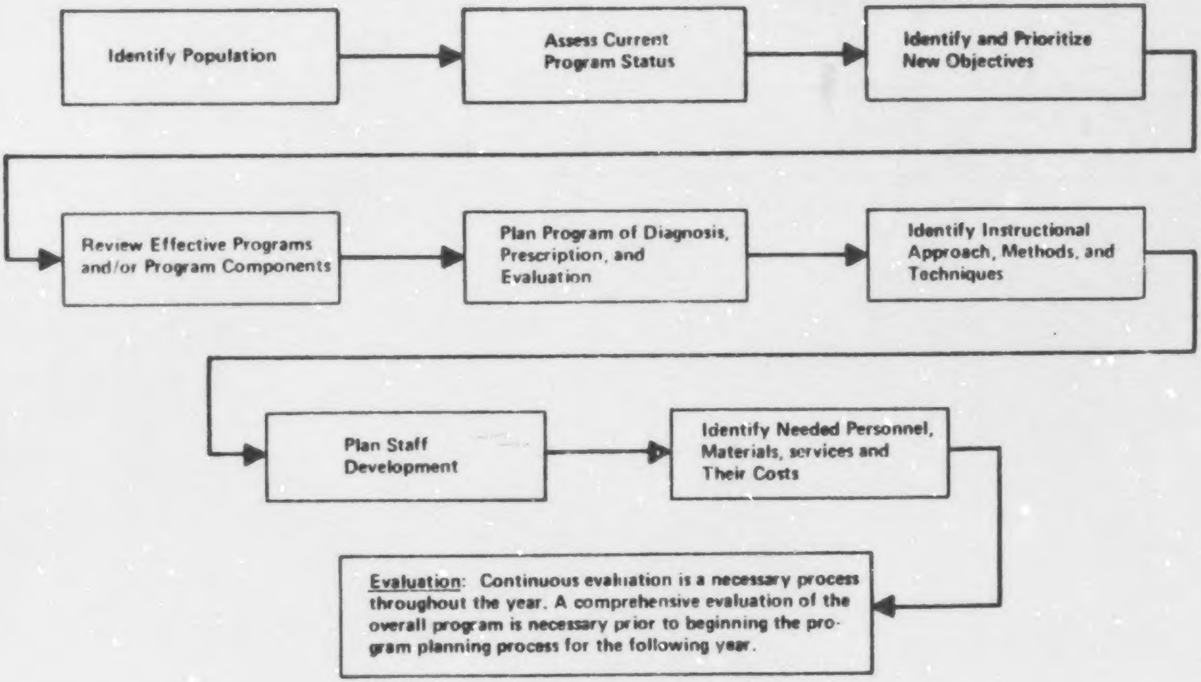
Identify Population
Assess Current Program Status
Identify and Prioritize New Objectives
Review Effective Programs and/or Program Components
Plan Program of Diagnosis, Prescription, and Evaluation
Identify Instructional Approach, Methods, and Techniques
Plan Staff Development
Identify Needed Personnel, Materials, services and Their Costs
Evaluation: Continuous evaluation is a necessary process throughout the year. A comprehensive evaluation of the overall program is necessary prior to beginning the program planning process for the following year.

*Chart from "Right to Read Assessment and Planning Handbook", U.S. Department of Health, Education, & Welfare, Office of Education

PROGRAM PLANNING

Excerpted from: Basic Skills Issues and Choices: An Introduction

Source: 1 Basic Skills Issues and Choices Issues in Basic Skills Planning and Instruction by Reed, L. and Ward, S. (Ed). St. Louis, Missouri: CEMREL, Inc., 1982 (published under contract with the Basic Skills Improvement Program, U.S. Department of Education, Washington, D.C.).

The Planning Process

The planning of basic skills programs and of all instruction in schools is best seen as an ongoing process. Just as teachers need regularly to assess their students' progress, so schools and school districts need regularly to assess their basic skills instructional programs.

Planning should not necessarily assume that a new program or new approach to instruction is needed. In many situations the best approach to improvement is providing help to teachers in carrying out a current program. The too frequent approach of initiating a "new" program every few years discourages teachers, who often are not involved in making the decision. As Jay Samuels notes in "Characteristics of Successful School Programs in Basic Skills," implementing a new program requires about six years and significant training and support. Effective leadership and teacher involvement, Samuels points out, are critical to both the planning and the change processes.

Although there are urgent needs for improving basic skills instruction, evidence suggests that we are not facing an emergency which would justify throwing out what we have been doing. In "Literacy Is Rising, But So Is Demand for Literacy," John Bormuth suggests that there is no evidence that reading scores in America are declining for the population as a whole, but evidence does point to the fact that literacy is increasingly important for success in our society. He argues that schools must give close attention to the goal of providing effective literacy instruction for all students.

In discussing the planning process we will consider *goals*, or expected student outcomes; *instruction*, or what happens in the classroom; and *assessment*, or measuring of student outcomes.

A crucial factor in planning is understanding the relationship among goals, instruction, and assessment. At first glance the relationship appears obvious: goals are established, instruction is aimed at reaching those goals, and the assessment reflects the degree to which the instruction has been effective in reaching the goals. Unfortunately, these relationships are often confused. The processes of goal setting, instructional planning, and assessment planning may be isolated and uncoordinated. School district goals may be expressed in vague or general terms that offer little guidance for instruction, or testing programs may be unrelated to the goals of the school or to the instruction that is provided.

An equally unfortunate situation is where standardized tests are used without careful thinking about the adequacy of the range of skills tested. In such a situation the tests may also determine the goals and instructional procedures used without professionals and parents ever carefully examining what students need to learn for effective functioning in the community. As Gorth and Perkins discuss in their chapter, many states are establishing tests to be used throughout the state. Often state assessments are focused around a minimal set of skills. Although this can serve a useful function for the state, it can have negative impacts at the school and district level if parents and professionals accept the state competencies and tests without asking whether students in the individual community or district need additional skills.

The matching of goals, instruction, and performance is critical for the development of effective basic skills programs. When schools are criticized as being ineffective, often there may only be mismatching of these three elements. Although it is unlikely that the goals of the school or its instruction have remained constant during the last 15 years, we know that the standardized tests of student performance have not been adapted to reflect changes either in curricula or in individual courses taken by students. What might be considered a failure to teach may be the teaching of different things. No amount of planning for curriculum change will be seen as effective if the tests designed to measure the results do not match goals and instruction.

Goals are often stated in general terms. Ideally they are related to objectives, which in turn are related directly to instruction. Where goals are not linked to objectives and translated into specific terms, one cannot be sure if the goals are being accomplished. Without the translation to specifics, different people can interpret the goals in their own ways and potentially expect quite different outcomes from instruction. Within a community, if there is disagreement about the goals of a basic skills program, it is unlikely that there will be agreement about the program's success.

Coordination and interaction among goal setting and planning for instruction and assessment are important because the terminology used to state goals is often open to many interpretations until the implications of those goals for instruction and assessment are defined. Interactive planning among those affected provides the option for changing goal statements when it is seen how they translate into practice.

Questions about Basic Skills Instruction

In attempting to make sense of issues and choices in basic skills instruction, the thirty-five consultants suggested a number of dimensions on which approaches to instruction differ. We have adapted their suggestions into ten questions which fall into the broad categories of goals, instruction, and assessment. The ten questions are selected to highlight important aspects of basic skills instruction.

Goals 1. What are the skills taught?

Instruction 2. What is the order in which instruction takes place?

3. How are skills taught and practiced?

4. What kinds of learning experiences do students have?

5. What is the setting in which learning takes place?

6. How is the learning situation structured?

7. How do teachers respond to students' creativity?

8. How are student "errors" viewed?

9. How is instruction in various skill areas or content areas coordinated or integrated?

Assessment 10. How is learning assessed?

Goals

What are the skills taught? The approaches available for consideration here relate to the number of different skills taught, as well as the types of skills. In mathematics and oral communication one approach would be limited to one or a few categories of skills (for example, those skills involved in computation or in public speaking) and another approach would include many additional categories of skills. Types of skills might be distinguished (1) as subskills (isolated skills) or holistic (meaning-focused or problem-solving skills) and (2) as school skills (academic skills) or non-school skills (life skills).

Instruction

What is the order in which instruction takes place? Some educators would propose a set and inflexible order while others would provide much flexibility. Textbooks and district curriculum guides often have a major influence on the skills to be taught and the order in which they will be taught.

How are skills taught and practiced? Skills may be taught and practiced in isolation or in the context of solving a problem or communicating a message.

What kinds of learning experiences do students have? Examples include learning by simple repetition or learning by solving problems or performing a task. More active settings might include student involvement in school and classroom governance and upkeep.

What is the setting in which learning takes place? Distinctions include learning only in school settings and learning in non-school settings.

How is the learning situation structured? Formal (highly structured) or informal (more dependent on student initiative) structures are compared, as are individual and group work.

How do teachers respond to students' creativity? Creativity may be encouraged or discouraged, either directly or indirectly, in the course of teaching any of the basic skills.

How are student "errors" viewed? Another distinction is between an emphasis on correcting "errors" or using student responses as clues to the students' reasoning processes. Regardless of the emphasis on errors, consultants agreed that correction should be made in a way that is not destructive to the child's self-esteem.

How is instruction in various skill areas and content areas coordinated or integrated? Each basic skills area may be taught in isolation so that it receives focused attention from the learner, or in conjunction with other curriculum, so relationships with other curriculum content are seen and so that more than one subject may be taught through a single learning experience.

Assessment

How is learning assessed? This question includes issues of frequency and formality of assessment. Decisions about how to monitor students' progress have an important impact on instruction and student learning.

Source: I Basic Skills Issues and Choices Issues in Basic Skills Planning and Instruction by Reed, L. and Ward, S. (Ed). St. Louis, Missouri: CEMREL, Inc., 1982 (published under contract with the Basic Skills Improvement Program, U.S. Department of Education, Washington, D.C.).

Making Choices in Basic Skills Instruction: Research and Theory

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Editors' Note: *In this paper Michael Kamil has drawn from the other papers, the synthesis meeting, and his own research on models of reading to outline questions and ideas to be considered in reviewing and planning basic skills programs. He discusses the role of educational theory and research in basic skills planning and suggests a theory of instruction which serves as a basis for seven questions. Kamil suggests that these questions should help to focus and organize issues to be considered in the planning process. As we prepared the summary and analysis of these papers, the seven questions also helped to determine the dimensions used for describing different approaches to basic skills instruction.*

There are no simple answers regarding the content and approaches to basic skills instruction. Like so many contemporary problems, the issues involving basic skills instruction are not only complex but are also based in deep-rooted beliefs about how the world ought to be and what the schools ought to be doing with children. At bottom, however, is a truly basic question: What, after all, are the basic skills?

On the one hand, the notion still persists that the basics are the traditional 3 Rs — reading, writing, and arithmetic. On the other hand, there is an ever-growing group of futurists who warn that the years to come will demand other "basics" — that reading, writing, and arithmetic will not be nearly enough. Similarly, some blame basic skill deficiencies on a lack of emphasis on phonics and computation, while others point to an ever-increasing body of research and experience which indicates that much more than phonics and computation are involved. And, while some place great emphasis on controlled, efficient, and specific instructional strategies for promoting greater basic skills learning in our children, others argue for a strong commitment to preserving the spontaneous childhood exploration emphasized in less constrained learning environments.

With the many choices and the lack of clear answers, we might hope to avoid making any decision. However, this is one choice individual school districts do not have. They must specify the nature of the basic skills when they plan instructional programs and, now, when they apply for Title II funds.

This paper and the next, written by Gerald Duffy, are designed to help program planners make choices about basic skills instruction — what to teach and how to teach it. This paper examines the contributions of research and theory. The Duffy paper examines the values and practical constraints which operate on the planners (and the school) to further shape the choices to be made about basic skills instruction.

To illustrate the stages of decision making, we have pictured the process of making basic skills choices as a funnel (Figure 1). The funnel shows graphically how the clarity and rationality of a basic skills program increases as choices are made. Beginning with a large number of vaguely understood and apparently unrelated options, these two papers suggest ways that the confusion, uncertainty, and potential conflicts can be reduced, narrowing the field of choices. The program which results from such a rational decision-making process takes into account the wide variations in student needs, as well as parental and professional values, and yet is understandable, viable, and coherent.

When planning a basic skills program, we can start either with the four basic skills areas specified in the federal Title II legislation (reading, mathematics, written communication, and oral communication), or we can begin with a broader assessment of what students need to learn. If we opt for the second choice, we must then determine how instruction in the basic skills can contribute to outcomes relevant to such student needs.

We believe it is preferable to begin with the broader assessment. An initial planning focus which considers only the four basic skills may lead to plans which do not match those of the community or the school, and which do not fit into the remainder of the school curriculum.

The Duffy paper and this one plunge directly into the middle of the basic skills planning process. It is assumed that a survey procedure like that presented in the Stump and Selz paper has already been completed. In situations where no survey has been made, the planning process for the basic skills program should begin with the identification and analysis of the basic skills components of the existing curriculum and a study of various factors within the community which should influence the planning process. A review of these factors will help in the determination of what, if any, changes should be made to best meet the needs of the community and its children.

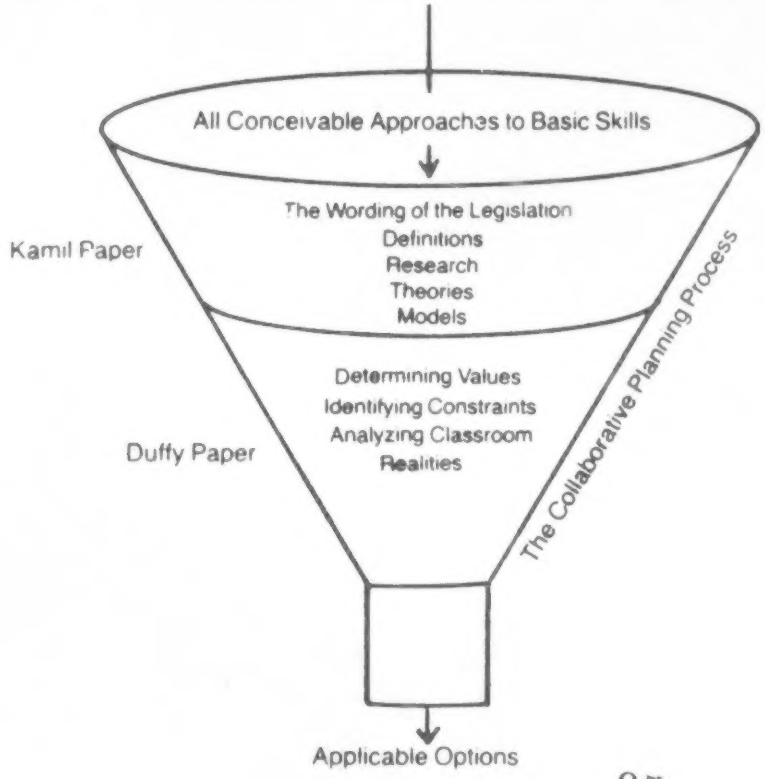
All Conceivable Approaches to Basic Skills
The Wording of the Legislation
Definitions
Research
Theories
Models
Kamil Paper
Determining Values
Identifying Constraints
Analyzing Classroom Realities
Duffy Paper
The Collaborative Planning Process
Applicable Options

Figure 1. The Process of Making Basic Skills Choices

The first ingredient in developing a program which meets the needs of the community is a collaborative planning group, whose task it is to identify, examine, and bring to resolution the conflicts between the values and constraints which govern curricular decisions in the school district. Such a group should include teachers, content specialists, central office personnel, board of education members, parents, and — particularly in the cases of adolescents — students.

The collaborative planning group must perform four analytical tasks. It must (1) examine the values of those involved, since these values will become the foundation for curricular principles; (2) examine the current instructional program; (3) examine the constraints operating on the school system which determine what the curriculum can and cannot be; and (4) determine what can reasonably be expected of classroom teachers. The results of these deliberations by the collaborative planning group are then used in developing a basic skills program for the district. In short, an effective basic skills program must be built upon a careful analysis of what is and what is not appropriate and possible for a particular district. A collaborative planning group charged with assessing the district's position can provide planners with the framework needed to create an appropriate basic skills program. The functioning of such a group is described more fully by Duffy.

Before such a planning group can accomplish its four tasks, the members need some framework for organizing their ideas about instruction. This instructional framework should include working definitions, theoretical bases, and instructional models. In this paper, we will attempt to provide some possible definitions, theories, and models. However, it is first necessary to take up the place of educational research as a basis for informing instructional choices.

The Role of Educational Research in Basic Skills Planning

For planning groups trying to choose among basic skills options, a review of the relevant research literature often proves frustrating. A not uncommon expectation is that there will be a "best" method, or group of methods. The sheer volume of seemingly contradictory results often leads practitioners to reject the research literature as even a partial solution to their difficulties in selecting methods of instruction. While it is true that some research findings can be difficult to interpret, there are others that are unambiguous. A few examples: The more individuals practice the better they will be (or become). Or, motivation is necessary for learning. Or, meaningful material is learned better than non-meaningful material. While these results, taken in isolation, are unambiguous, they are not unrelated. Practice appears to lead to greater competence, but if the student is motivated and the material is meaningful, the practice is more effective. Such interrelatedness gives some idea of the complexity of instructional research.

In attempting to weigh and interpret the results of instructional research, planning groups should bear in mind the following limitations of such research.

First, research on instruction is often conducted after the model of the natural sciences in laboratory conditions. It is difficult to bring appropriate populations, teachers, and settings into the laboratory. The recent concern over "ecological validity" (the question of a study's validity or appropriateness in the situation to which the results will be applied) is a reflection of this situation. It would appear easier to derive specific direction for instruction from educational research that is conducted in actual classrooms. Laboratory studies present difficulties when the results are transferred, without additional verification, to the school setting. Similarly, research studies in reading using nonsense syllables or single words are difficult to translate into educational practice.

Scientists have been reluctant to do research outside the laboratory because of the problems they encounter in controlling all of the variables. The use of computers may make it technologically possible to measure, if not control, extremely large numbers of these factors. If this becomes true, studies will come closer to ecological validity (Bronfenbrenner, 1976).

Second, practitioners often look to researchers with the expectation that they will develop entirely new and different techniques that will be "the answer." At best, researchers can only hope to verify the efficacy of existing techniques, rejecting those of little value. As research methods become more attuned to ecological validity, the testing of methods will become more precise. Researchers will know *why* specific methods do or do not, should or should not, work.

Third, many research results appear contradictory because different researchers are dealing with different variations of the same problem. Replication studies (studies performed more than once by different researchers) can provide greater certainty about the findings, but unfortunately, few examples of such replications are presently available.

Fourth, the differences in performance should be instructionally important as well as statistically significant. For example, many studies of word recognition find statistically significant differences that are of the order of milliseconds. Such differences do not represent any usable (or even noticeable) differences for the classroom teacher. On the other hand, instructional methods very different in appearance often do not produce statistically significant differences in achievement.

It is not the purpose of this paper to review all the research on learning and teaching. Planners who need help with this task will find that several good integrative reviews are available. Those listed in the reference section offer information about specific instructional questions.

Planners should be advised that the direct instructional guidance available from research is limited by the relative lack of research that is ecologically valid, replicated, and conducted on appropriate populations, and which shows instructionally important differences. Aside from the cautions derived from these considerations, there is a useful rule of thumb: Research is to be believed or trusted if there are few (or no) contradictory studies, or if there is general agreement about the findings among respected researchers and practitioners.

There is reason to hope that we will eventually be able to find the answers we need from research. For the moment, however, curriculum planners may use these rough guidelines to select from the mass of research findings and data which are available.

How Can Definitions Help?

Definitions are at the root of the basic skills controversy. One person's definition of reading or mathematics dictates what that person's "basics" will be. Someone who defines reading or mathematics differently will specify different basics. However, definitions also provide a potential solution to some of the basic skills problems. By carefully examining the definitions which distinguish the basic skills alternatives, we can clarify the issues and build a foundation upon which to make choices. In short, the basic skills controversy becomes somewhat less messy if we can make some sense out of the definitional issues.

. . . definitions provide a potential solution to some of the basic skills problems. By carefully examining the definitions which distinguish the basic skills alternatives, we can clarify the issues and build a foundation upon which to make choices.

Let's approach the definitional task by looking at the terms *basics* and *skills*. In our discussion we will consider a skill as a set of behaviors and knowledge which can be applied to a specific situation — either to understand or to change the situation. The presence of a skill or skills is shown by a demonstrated ability to perform an intellectual or physical task. It is assumed that skills can be learned, forgotten, and re-learned. It is also assumed that a person may possess a particular skill, but distractions, anxiety, or confused direction may interfere with the demonstration of that particular skill in a given situation.

There is no great controversy over the term *skills*, but when we consider the term *basic*, we are confronted with a paradox: everyone seems to believe that basic skills are an essential part of the educational endeavor, but there is intense controversy over what *basic* means.

Much of the difficulty with the definition of *basic* arises because people have different sources for their definitions. The dictionary uses such terms as *fundamental* and *essential* in defining *basic*. For most people, basic skills include the skills which are essential for functioning in society and for learning other skills. The controversy continues when we try to determine what is and isn't essential.

The federal Title II legislation includes the familiar reading, writing, and arithmetic as basic skills, and adds oral communication. Planners would be well advised to work through to a consensus on defining basic skills. This is an important preliminary step and should be taken before planners take up the consideration of the role of theories and models in narrowing instructional choices.

How Can Choices Be Informed by Theory?

Educational research is the enterprise of discovering what variables in a situation influence desired outcomes. Although research cannot guarantee answers about basic skills instruction, it often suggests the kinds of questions that should be asked.

One of the goals of research is to create theories which will identify what is important in a situation and suggest ways to change a situation for the better. Theories in education do not have the same validity, formality, or rigor as those in the physical sciences. Often, our present understanding is not sufficient to provide a theoretical model of an educational process. Reading provides a good example of this difficulty. The closest we have come to a theoretical conception of reading is that the reader translates print from a text into meaning (comprehension). We do not know whether the reader's comprehension processes begin with the text and move through the senses to the mind, or whether they begin in the mind and proceed toward the printed symbols.

Because there is no firm, unequivocal evidence about the nature of the reading process, different theories have been formulated to represent, identify, and order the component processes that researchers believe are vital to reading. These theories are best taken as informal guides to thinking about reading, rather than as scientifically proven statements. This qualifies, but does not negate, their usefulness in instruction, for informal theories can often be very useful for the purpose of making choices and decisions.

Models determine and define the teaching/learning process, even when teachers are not consciously aware of acting on the basis of such models. Every teacher operates with at least an implicit model of reading. The decisions teachers make are a function of their beliefs about reading. However, research has also indicated that teachers' decisions are not solely the result of translating these implicit models directly into practice. Rather, the implicit models teachers act upon are modified by a number of external classroom conditions. Among these are individual student characteristics (general ability, for example), the materials available, and the need for efficient classroom management. Formal, explicit theories of reading typically do not deal with such environmental variables.

This paper will not consider specific research data, but will examine some tentative instructional theories in order to arrive at questions which should be asked in curriculum planning. We will first consider a theory which provides an outline of the major aspects of instruction. We will then suggest the types of questions which can be derived from that theory.

Taken together, the following three statements define and delimit the instructional process. They will represent our general theory of instruction.

1. Learning results in changes in how an individual understands the world or changes in the individual's behavior.
2. Instruction is arranging the environment so that learning can occur. It is influenced by interactions among the beliefs and skills of parents, teachers, students, and others.
3. Performance is applying learning to a given situation.

The following questions, derived from the three basic theoretical statements above, should be asked by planners before decisions are made about basic skills instruction. The answers will shape the program, including materials, management systems, and instruction. Staff development also will ultimately depend on the answers to these questions.

These questions are derived from the first theoretical statement:

What are the units of learning? Since learning results in changes in knowledge, decisions about instruction must deal with these basic units. The tradition of cognitive psychology provides a long list of possible units, including schemata, lists, networks of associations, or processes. Educators have suggested skills or facts as basic units.

What should be the content of instruction? Each content area is defined by a model that specifies the components to be learned. It also specifies the arrangement of the components (as a hierarchy or as a sequence, for example).

These questions are derived from the second theoretical statement:

What should the format of instruction be? Among specific issues suggested by the second statement are questions about whether learning should be inductive or deductive, the amount of practice and repetition necessary, and the types of motivation and reinforcement thought appropriate. Some of these questions may be dictated by external concerns — for example, the types of materials available.

When should instruction be given? Two issues are important here — developmental appropriateness and sequencing of subject matter. Instruction should not be given until children have reached the level of cognitive development which enables them to learn the subject matter. Sequencing will ultimately be determined by the content.

What is the role of individual differences in instruction? Should instruction be individualized or should it be conducted in groups? Learning rate, learning style, and disabilities are all pertinent to this issue.

What is the role of social dynamics in instruction? Important here are questions of effect, teaching styles, and interpersonal relations. Classroom environment can strongly influence instruction.

This question is derived from the third theoretical statement:

How should learning be evaluated? The third statement suggests that performance defines evaluation. Tests and management systems should be chosen with this in mind.

Three Models of Instruction

The present curricular controversy appears to be between an instructional model with a focus on skills in isolation, and a model with a focus on the meaning and context of skills. We will refer to the first model as *subskills* and the second as *holistic*. Although there are advocates for the pure forms of these instructional models, the common practice is to use a modified approach. For the sake of our discussion, we will speak of this approach as a "balanced" model. This third model is not just a mixture or "average" of the other two. It adds an element of the interaction between the other two models. We will take up each model in order to distinguish the nature of the assumptions about performance, learning, and instruction peculiar to each.

The conflict over basic skills instruction is a reflection of the very different models of performance, learning, and instruction which people have in their heads. In most cases these models are not clear to those involved in the controversy. It is our belief that it will be far easier to resolve the controversial questions in program planning if all of those involved are fully aware of the theoretical bases for their positions.

Although planners must make choices, our emphasis here is not on choosing one of the three perspectives, but on raising the awareness of what it means to base a decision on one of these three prevalent models. We are not, therefore, concerned so much with advocating a single "best" perspective as with presenting the widest range of possibilities. It is hoped that this paper will help delineate important issues and goals in basic skills instruction. As a result of the discussion of models here, a school may decide either to modify its existing programs or to implement new ones. The discussion here and under the subsequent section will highlight distinctions among what we are calling *holistic*, *subskills*, and *balanced models*.

In the subskills model, the primary emphasis is on the child's learning individual skills through direct instruction on and extended experience with each skill in isolation. The expectation is that the use of those skills to convey and receive meaning and solve problems will be mastered subsequently.

In the holistic model, the child is believed to learn through experiences involving conveying meaning or solving problems. The expectation is that the individual skills will be mastered in the process, without removing them from context.

There are several characteristics of these models that can be used to classify them. First, they can be identified by their initiating focus — the assumptions they make about the nature of learning and instruction. Holistic models assume that the content of instruction is not separable into component skills for teaching or learning. These models generally assume that when skills are taught or used in isolation, they are qualitatively different from what they are when used in a whole-situation context. For example, a holistic model of reading assumes that the initiating focus is on meaning. It also assumes that readers "predict" meaning and use the text only to verify the predicted meaning.

The conflict over basic skills instruction is a reflection of the very different models of performance, learning, and instruction which people have in their heads. In most cases these models are not clear to those involved in the controversy.

A subskills model, on the other hand, assumes that the initiating focus of learning is on the individual components of the process. By learning each of the component skills, the child can learn the entire process. In reading, such a model assumes that the student learns letters, proceeds to words, phrases, sentences, and so on. By combining all of the component skills, the student arrives at the meaning of the text. Almost all programs which emphasize *mastery learning* contain some subskills assumptions. Those programs which involve *skills management systems* clearly have such assumptions. (In reading, these are often referred to as code-emphasis.)

The third type of model is called a *balanced model*. Here, learning and instruction are believed to be initiated both holistically and from a subskills perspective. The two processes are assumed to be mutually facilitating. The holistic prediction of meaning helps to make the identification of component parts (by use of the subskills) easier. At the same time, the identification of some of the component elements facilitates the prediction of meaning.

Learning does not occur without some knowledge of the correctness of responses. Every model contains some assumptions about what are acceptable responses in specific situations. In mathematics, for example, a holistic approach might provide positive feedback if the student obtains the incorrect answer by an appropriate method. A subskills model might only give positive feedback for each correct step in the process, so that positive feedback occurs only when the answer is correct.

Using Models to Make Instructional Choices

The questions about instruction discussed previously were derived from our original three theoretical assumptions about instruction. We then added the context of three models of instruction — holistic, subskills, and balanced. In this section we will place the instructional question in the model context. We find that the particular model used will determine the answers to the instructional questions. The use of such a procedure will help planners in the task of specifying programs consistent with a particular approach. Where appropriate, two levels of instruction will be considered. At one level will be the individual skill areas; at the other will be the entire curriculum. Answers will differ according to the level; for example, answers provided for reading will be more specific than those provided for the curriculum as a whole. It is important to obtain an answer to every question, even though such answers may not always be readily apparent.

It is necessary here to inject a word of caution. In most of the model comparisons discussed here, we noted that the balanced model combined aspects of the holistic and subskills models. This does not mean that the balanced model is automatically the "best." If a school is strongly committed to either the holistic or the subskills model, the eclecticism inherent in the balanced model can be inefficient or detrimental. With this caution in mind, let us turn to the instructional questions we identified earlier:

What are the units of learning? For subskills models, learning is related to relatively small units, which are then arranged to produce larger units of learning. Holistic models typically specify larger units of learning, more directly related to one another. Balanced models often do not specify the units, but they are typically combinations of the two types. (This same analysis is true at the content level as well as at the curriculum level.)

What should the content of instruction be? In basic skills, some of the content is predetermined by the definitions. For the entire curriculum, holistic models suggest that the various skill areas be related to one another. Subskills models indicate that each area could be taught separately. Balanced models provide some mix of separation and integration.

What should the format of instruction be? Here again, there are differences among the classes of models. Subskills models often stress drill, practice, and repetition. Motivation and reinforcement are often seen as external to the child. Holistic models place much less emphasis (or none) on learning in the context of drill and repetition. These models view motivation and reinforcement as necessarily intrinsic. Balanced models view instruction as a combination of these factors. For the entire curriculum, the formats suggested by each model would be the same as they are for separate areas of the curriculum.

When should instruction be given? The answer given by most holistic models to this question is, when the child is ready. Specific components are not stressed, so there is usually little or no emphasis on the sequence of instruction. Subskills models usually, but not always, have highly structured sequences of instruction. Developmental appropriateness is also, of course, important in subskills models. Balanced models stress giving both subskills and holistic instruction interactively from the beginning.

How should instruction be evaluated? Evaluation procedures are dictated by the answers to all of the previous questions. Holistic instruction, for example, cannot be fairly evaluated by skills management tests. Nor can subskills instruction be fairly evaluated by holistic instruments. There are no unique evaluation techniques for balanced models. Rather, a combination of evaluations appropriate for holistic and subskills approaches is dictated. It is obvious here that a consistent match must exist between instruction and evaluation. If the match does not exist, instruction and evaluation are both doomed to be ineffective.

What is the role of individual differences in instruction? Holistic models stress individuality and respect for individual differences. The child is actively involved in decision making for instruction. While the subskills model can also stress individuality, the decision-making procedure is not typically under the student's control. However, progress is expected to vary in rate from student to student. Balanced models again combine aspects of both.

Consistency

It is vitally important, particularly in dealing with complex programs, for the planners to be consistent. Three types of consistency can be identified. First, teachers, planners, and administrators must have consistent expectations about instructional programs. That is, all of those who will plan and implement a new program should use the same criteria in evaluating the results of the program. If expectations are different, the same results will be judged differently. This consistency of expectations is a hedge against needless programmatic changes.

A second type of consistency is that of underlying theories. There must not be conflicts or incompatibility between the general theories on which instruction is to be based, or between the general theories and the instructional models. For example, if the model of learning is holistic, but the underlying theory is that instruction should be directed to development of individual skills, difficulties will arise. A program must be based on consistent principles if it is to be successful. It is a prime function of the planner to ensure that the principles underlying a program are consistent.

Finally, there must be consistency between instructional goals and methods of evaluation. This sounds trivial, but, in fact, it is not. A program based on holistic teaching should not be evaluated from a subskills point of view. The teaching materials themselves should have appropriate evaluation instruments. The reverse is also true: evaluation materials determine what teaching materials are appropriate.

Conclusion

In this paper, we have seen how program planners can use definitions, theories, models, and research findings to shape decisions on instructional programs. In the Duffy paper, some of the more practical values and constraints affecting choices among options will be discussed.

After reading through the papers in this volume, particularly those describing the instructional options, program planners may be moved to ask whether *any* combination of these options can be used? The answer (unfortunately) is "yes and no." While it is possible to select any combination of these options, it may not be either advisable or desirable to do so. The most important considerations are that the options chosen must not conflict with each other, with instructional goals, with the available materials, or with teacher orientations and competencies.

Recent work by Duffy and his colleagues (Duffy and Metheny, 1979) suggests that teachers base their instructional decisions on some or all of these factors. Planners must take particular care to involve all levels of instructional personnel in all planning stages of a proposal, for a successful program must take into account the fact that instructional decisions are necessarily made in the light of the reality of the classroom situation. Staff development, materials acquisition, and classroom management are integral components of decisions, as surely as are research findings and theories and models of the instructional process.

References

Bowden, R.; Butke, S.; and Duffy, G. *Teacher Conceptions of Reading and Their Influence on Instruction*. Research Series No. 47. East Lansing, Michigan: Institute for Research on Teaching, Michigan State University, 1979.

Bronfenbrenner, U. "The Experimental Ecology of Education." *Educational Researcher*, 5 (1976): 5-16.

Burns, P.C. "Reading Research That Has Influenced Reading Instruction: 1960-1974." *School Media Quarterly*, 3 (1975): 142-148.

Duffy, G., and Metheny, W. "The Development of an Instrument to Measure Teacher Beliefs about Reading." In *Reading Research: Studies and Applications*, edited by M. Kamil and A. Moe. Clemson, South Carolina: National Reading Conference, 1979.

Gibson, E.J. "Theory-Based Research on Reading and Its Implications for Instruction." In *Toward a Literate Society*, edited by J.B. Carroll and J.S. Chall. New York: McGraw-Hill, 1975.

Harste, J., and Burke, C.L. "A New Hypothesis for Reading Teacher Research: Both the Teaching and Learning of Reading are Theoretically Based." In *Reading: Theory, Research and Practice*, edited by P.D. Pearson. Clemson, South Carolina: National Reading Conference, 1977.

Harste, J.C., and Carey, R.F., eds. *New Perspectives on Comprehension*. Bloomington, Indiana: Indiana University, 1979.

Kamil, M.L. "Models of Reading: What Are the Implications for Instruction in Comprehension?" In *Aspects of Reading Education*, edited by S. Pflaum-Connor. Berkeley, California: McCutchan Publishing, 1978.

Kamil, M.L., and Pearson, P.D. "Theory and Practice in Teaching Reading." *New York Education Quarterly*, 10, 2 (1979): 9-16.

Weaver, P., with Shonkoff, F. *Research Within Reach: A Research-Guided Response to Concerns of Reading Educators*. St. Louis, Missouri: Research and Development Interpretation Service, CEMREL, Inc., 1978.

Source: 1 Basic Skills Issues and Choices Issues in Basic Skills Planning and
Instruction by Reed, L. and Ward, S. (Ed). St. Louis, Missouri: CEMREL,
Inc., 1982 (published under contract with the Basic Skills Improvement
Program, U.S. Department of Education, Washington, D.C.).

Making Basic Skills Choices: Values and Constraints

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Editors' Note: *In this paper Gerald Duffy has turned to the other papers and the synthesis meeting discussions to provide general suggestions on steps to take in the reviewing and planning of basic skills programs. Duffy proposes the use of a collaborative planning group and suggests that the planning group must determine community values, analyze constraints, consider the teacher's situation, and examine how all three interact and influence a basic skills program.*

Ideally, the program planning process includes an analysis and assessment of the existing school program and a comparison of that program with school and community expectations. Actual program planning tends either to be overly determined by existing programs or to be done almost in isolation of existing programs. We hope that some of the ideas presented in these papers will facilitate the review and assessment of existing programs and a similar review of school and community needs. The entire collection of papers is intended to make available the outcomes of research to help guide the review, assessment, and, where appropriate, redirection of programs.

All planning should take place within the context of a collaborative planning group, which should be made up of respected and openly identified representatives of the various groups which have a stake in the instructional process and its outcomes. This paper will describe some of the issues that such a group must consider and how research might contribute to the planning process. Although the emphasis here is on collaboration and the involvement of representatives from many groups in planning, it should be noted that the writing of a plan is often best done by one or two people. The writing itself should be based on the work of the planning group and an ongoing review from that group.

Role of a Collaborative Planning Group

A first step in planning should be the establishment of the collaborative planning group, which should include school personnel from all levels and, if possible, parents. This group should meet on a regular basis (1) to assess the local district's position with respect to subject matter, the learner, the teacher, and the learning environment; (2) to identify those constraints which society, special interest groups, and school managers place upon curricular programs — constraints which restrict the school district's options; and (3) to identify the realities of the classroom which affect the implementation of any program. This planning group, in effect, regularly "takes the pulse" of the local school district, clarifying and modifying those educational principles which form the cornerstone of the district's curriculum. The existence of the planning group helps to ensure that the best ideas of various groups are contributed to the planning process.

Tasks of the Planning Group: Determining Values

Making choices among the basic skills is a value-laden process. The problem is not so much whether particular models have been established by empirical inquiry to be "best," but, rather, what the group believes concerning what the basic skills ought to be and what impact schools should have on children. To choose among these options, the school district's collaborative planning group must first identify what it values about school and schooling. These values then form a basis for the principles upon which the basic skills programs will be built.

The holistic/subskills debate described in the Kamii paper is a good example of the complexity that can be involved in making value choices. Each side has its particular views about what should happen in basic skills programs. For instance, the supporters of holistic instruction value learning situations in which language and mathematics develop naturally, in which children spend their time on activities which have intrinsic interest and meaning, and in which teachers allow children to achieve their individual potential as learners. It is their hope that the holistic approach to basic skills will enhance the understanding of the language and mathematics processes which they believe children already possess intuitively if they are but allowed to display it. Further, they hope that by emphasizing real-life contexts, children will not only be more proficient in the skills themselves but will have a realistic grasp of the role of these skills in their lives and a vision of the rewards which result from using these skills.

Supporters of the holistic approach fear that the values children develop from holistic instruction will be lost if instruction is fragmented. In such an environment, they believe, the language and mathematics processes would be isolated into useless pieces of knowledge, the natural curiosity of children would be squelched, emphasis on minimal competencies would overshadow the creative use of language and mathematics, low-level skills would be given preference over higher-level, problem-solving skills, low-ability students would be favored over the gifted, artificial testing devices would force teachers to "teach to the test" rather than emphasize the process, and the professional initiative of teachers would be stifled because they would have to become "technicians" rather than "facilitators."

Advocates of the subskills approach to instruction value different things. They view their approach as one which sharpens the focus of instruction, which implements carefully conceived skill sequences, which breaks learning down into manageable steps, and which guarantees each child systematic assistance in learning the basic skills. They value the skills approach to basic skills instruction because they believe it provides both teachers and children with a detailed "road map" for teaching and learning language and mathematics processes, because it yields scientific diagnostic data which serve as an "early warning system" when a child is not making satisfactory progress, and because it narrows the achievement range in the learning of basic skills. Further, they fear that these values will be lost if the holistic view is adopted. For instance, they fear that a holistic approach to basic skills instruction ignores the child who does not learn "naturally," that children are expected to perform complex tasks when they don't know how, that it encourages poor teachers to create an "anything goes" environment, that lazy teachers can avoid the responsibility for teaching by saying that they are "facilitating," that the excessive flexibility associated with holistic approaches leads to inefficient use of instructional time, that the approach does not lend itself to the current demands from society regarding competency testing and other forms of accountability, and that the teacher's role as an instructor is ignored.

It is obvious that what is valued about basic skills by one group is not necessarily valued by another. Consequently, a school system proposing a basic skills program must first identify what it believes the basic skills program ought to include and what form it ought to take in the classroom.

It is obvious that what is valued about basic skills by one group is not necessarily valued by another. Consequently, a school system proposing a basic skills program must first identify what it believes the basic skills program ought to include and what form it ought to take in the classroom. Determining the values held by all of the relevant groups in the community served by the school district is not easy, since it is unrealistic to expect consensus on value-laden issues. However, rational processes for arriving at a determination are available.

Basically, the process recommended here is one of self-examination — a process in which the collaborative planning group asks itself a series of questions about the basic skills subject matter, the learner who receives basic skills instruction, the teacher who provides the instruction, and the environment within which the instruction takes place. In essence, the planning group uses these categories as a framework for deciding what the basic skills program ought to be. The framework for the questions to be posed is based on the four categories discussed by Schwab (1978). These particular categories are not the only ones that can be used to identify the basic skills values of a particular school district. For instance, the questions about instruction which are posed in the Kamil paper could be adapted for the same purpose.

While there is no attempt to supply an exhaustive list of questions here, the following are illustrative of the kinds of questions that can yield insight regarding what a particular community values about basic skills:

Subject Matter

1. What are the units of basic skills instruction? Should the focus be on isolated units or on larger language units?
2. What are the goals of basic skills instruction? Should the goal be skill acquisition or the creative application of skills?
3. How specific should the basic skills objectives be? Should we emphasize behaviorally stated objectives or more global statements?
4. Should the basic skills be treated as a whole, broken into component parts, or combined in some logical manner?
5. Should the basic skills be thought of separately, as part of an integrated whole, or both?

The Learner

1. Should learners be actively involved in using the skills in real situations, should they master the skills in isolation, or should they do both?
2. Do children learn to read naturally or do they need to be taught?
3. Are children basically self-motivating, do they need some form of external motivation, or does the moment determine the type of motivation?
4. Should children be allowed to explore, should they be provided with structure and routine, or should there be some kind of combination?
5. Should children's personal development take priority over their skill development?

The Teacher

1. Should teachers directly intervene with children to teach basic skills, should they be facilitators who bring children together with situations in which they can meaningfully use their skills, or should they do each at appropriate times?
2. Should teachers follow a structured curriculum sequence, or should they develop a more "open" environment which emphasizes whole-language activities?
3. Should instruction in basic skills be integrated into real-life contexts, or should instruction be confined to textbook and classroom activities?
4. Should the basic skills become automatic responses which children produce instantly, or should they be thought of as reflective processes?
5. How should basic skills instruction be evaluated?

The Environment

1. Should the classroom reflect real-life situations, should it be a place where academic learning is emphasized, or should it be some combination of these?

2. What are the needs and unique characteristics of the children?
3. What expectations should we set for our children? Should children be viewed as individuals having unique developmental patterns, or should they be expected to maintain "average" growth patterns in the basic skills?

There are no right answers to these questions — the collaborative planning group must decide on the answers that best fit the individual school system. By asking questions such as those listed, and by hammering out answers which reflect the sense of the group, the planning group will decide what it feels the basic skills ought to be. These values will form part of the foundation of the school curriculum and can be used, in conjunction with the planning group's knowledge of the existing and emerging research, to help make decisions about the nature of the basic skills program.

Tasks of the Planning Group: Analyzing Constraints

Constraints on school districts tend to fall into three categories: societal forces, administrative concerns, and perspectives of special groups. Every school district is subject to constraints of one kind or another, all of which further restrict the basic skills choices available to the planning group. In other words, the values identified through the process described in the preceding section are only part of the input the group will have to deal with; the degree to which the values can be reflected in the program will always be affected by the constraints which work upon the school system. Consequently, a second task of the collaborative planning group is to analyze these constraints and determine how they influence the principles which emerged as a result of examining values. The examination of constraints must be a continuing process.

Societal forces on school districts surface as explicit and implicit mandates. *Explicit mandates* include legislation which requires that certain textbooks or tests or programs be used or avoided, and court orders stemming from equal opportunity lawsuits which require that particular programs or procedures be followed or avoided. *Implicit mandates* include public opinion in the community, nationwide trends, and the concern of citizen groups representing educational views ranging from "back to basics" to "future shock." Both types of mandates restrict the range of options by dictating a school district's choices regarding basic skills. In the case of explicit mandates, it is unlawful for the school to adopt a basic skills program which conflicts with legislated or court-ordered programs. Ignoring implicit mandates, on the other hand, violates the tradition that American schools should provide educational services according to public preference.

School administrators are subject not only to the constraints described above, but to others as well. For instance, administrators must examine any proposed basic skills program from the perspective of what is being done currently. The implementation of a new program which requires drastic changes from the old is often logistically impossible (as when new records are required or extensive training is needed). Similarly, the initial cost of a program to a school district is a primary concern, as is its cost effectiveness over a period of time. Also, administrators are constrained by staff resources, both in terms of the number of professional and nonprofessional personnel needed to implement a particular basic skills program, and in terms of the skills and abilities which those staff members must have. Finally, and certainly not least, is the administrator's concern for the impact of the basic skills program on public relations. The administrator depends upon the public for the financial support of the school and must therefore be cognizant of how the proposed basic skills program will be perceived by the public.

> ***. . . school systems are not free to implement without restraint their beliefs and values about basic skills. Rather, they must filter these beliefs and values through the restrictions imposed by the explicit and implicit mandates of society, by the realities of managing a school system, and by the various special interest groups that put pressure on the schools.***

Each of these factors is part of the administrator's reality, and each restricts the range of decisions which can be made regarding the nature of the basic skills program. Administrators can only go as far as financial resources, staff resources, and the approval of the public will permit.

Also shaping the nature of a basic skills program are those groups representing special interests. Two current examples are the advocates of programs for bilingual children and for handicapped children. Whatever shape the basic skills program takes, it must account both for the concerns of those who say that non-English-speaking students in our population are being ignored and for the legislated mandates regarding mainstreaming of special education students.

In short, school systems are not free to implement without restraint their beliefs and values about basic skills. Rather, they must filter these beliefs and values through the restrictions imposed by the explicit and implicit mandates of society, by the realities of managing a school system, and by the various special interest groups that put pressure on the schools.

Tasks of the Planning Group: Combining Constraints and Values

A particularly difficult phase in the creation of a basic skills program is that of bringing constraints and values together to form program policy. Neither the values nor the constraints can be neglected or carelessly compromised. If values are neglected to accommodate the constraints, the result may be a basic skills program built on expediency. If constraints are neglected and values emphasized, the result may be a plan which sounds nice but is dismissed by everyone as unrealistic. Comprehensive and consistent basic skills programs must be based on the principles people value and on the realities of the situation in which the program is to be implemented.

One way to examine both values and constraints in a systematic way is to list the values held by the district in one column, the constraints (if any) which limit that value in another, and the modified program policy in a third. For instance:

Value: Children's reading growth should be evaluated by noting how often they use reading in real-life situations.

Constraint: The state education department has mandated the use of an annual test to evaluate students' skill acquisition.

A possible program policy: Evaluate in two ways: use the state test to evaluate skill growth, and note how often the children use reading for your own evaluative purposes.

Note that the hypothetical school system holds a value which seems diametrically opposed to the constraint imposed by the state education department. However, by clearly identifying both the value and the constraint, a decision evolves which effectively deals with both. Other examples can be provided. For instance:

Value: Children should become involved in mathematics as a process of thinking rather than being limited to computation.

Constraint: Teachers do not have the training or the material to implement a program which develops mathematics as a thinking process.

A possible program policy: Institute a five-year plan in which in-service training is offered and materials are purchased gradually over an extended period of time.

In this case, an analysis of both the values and the constraints indicates that, while a current condition constrains the value, the implementation of a long-range plan gradually eliminates the constraint and makes the value a possibility.

Some values and constraints, of course, are actually in direct opposition to each other. For instance:

Value: Children should not receive instruction in mechanics or grammar until after they are writing fluently.

Constraint: In response to a lawsuit, a judge issues a court order requiring that children immediately be given instruction in the individual mechanical skills of sentence structure and punctuation.

A possible program policy: The two are probably irreconcilable; the schools would have to comply with the court order rather than delay instruction in the mechanics.

In summary, the collaborative planning group can resolve the apparent conflict between constraints and values by systematically examining each value and any apparent constraint which seems to impinge upon it, analyzing the ways in which the apparent conflict can be resolved, and making a decision which implements the resolution. The result is a realistic policy statement which reflects the unique needs of and restrictions upon the school it is designed to serve.

Tasks of the Planning Group: Considering the Reality Faced by Teachers

The collaborative planning group's first crucial steps are the consideration of values and constraints and the systematic reconciliation of any conflicts between the two in order to define what the basic skills program will be for the school. However, one more crucial question remains to be considered: Will the classroom teachers who are expected to implement this plan be willing and able to do so? Failure to consider this question can often doom to failure an otherwise carefully conceived and painstakingly planned basic skills program.

The collaborative planning group must include the teacher's reality as part of their deliberations and must accurately appraise the degree to which curricular programs make demands which teachers are capable of fulfilling. Programs which conflict with the reality of the teacher's world will fail —

At issue here is the nature of the instructional demands of the proposed basic skills program as it meshes with what teachers can be reasonably expected to do. The givens in the instructional picture include the size of the class, the difficulties of managing the daily instruction of large groups of children, the shortage of materials and resources, the limitations of human energy, and the prior training and experience of the teacher. In short, whatever the basic skills program is, it must be manageable and usable by the teachers involved.

This aspect of the basic skills planning takes on even more importance when one considers that recent research indicates that teachers have little time to make significant instructional decisions as they go along (Buike, 1980; Morine-Dershimer, 1979; Sendelbach and Smith, 1980; Yinger, 1978). The task of managing thirty energetic and sometimes explosive youngsters for six hours a day and thirty hours a week is a demanding and draining one which teachers make tolerable by establishing routines that demand few spontaneous decisions, by employing recitation-like instructional formats, by making plans which emphasize activities rather than objectives, and by monitoring the activity flow of the classroom to ensure that all students are busily engaged.

Such structuring is not indicative of a lack of teacher professionalism. On the contrary, it is the reality with which the teacher lives each day — the work place has complexities and limitations which teachers must come to terms with in the process of carrying out their assigned teaching tasks. The collaborative planning group must include the teacher's reality as part of their deliberations and must accurately appraise the degree to which curricular programs make demands which teachers are capable of fulfilling. Programs which conflict with the reality of the teacher's world will fail — the plan can be made but teachers cannot implement that plan in classrooms unless it is compatible with the day-to-day realities of teaching. Often, the conceptions of people within the school itself vary about what the plans are. Ignanovich, Cusick, and Ray (1979) point out that the conceptions of curricular programs as expressed by central office staff are quite different from those expressed by classroom teachers. Consequently, basic skills plans need to be attuned to these problems as well as to the problems involved in dealing with values and constraints.

Conclusion

The Kamil paper presented a discussion of how legislation, research, and various models help to inform basic skills planning. This process was illustrated by a funnel in which the range of choices becomes narrower as more and more issues related to the basic skills are examined.

In this chapter, the funnel has become even narrower (see Figure 1) as the practical realities of the local school district are considered. Values, constraints, and teachers' perceptions all serve to narrow the range of options further, so that the planning task, while still extensive, at least has some boundaries. In this manner, basic skills options can be narrowed in a logical and rational manner, eliminating the necessity of selecting prepackaged answers, politically expedient programs, or "pie-in-the-sky" proposals.

Making choices among the basic skills options can be a frustrating experience, because divergent values and multiple constraints often seem to be more influential than definitive, empirically based answers. This occurs partly because of the lack of research-based answers for many questions and partly because the schools operate in a situation where many powerful influences must be considered. Too often the existence of many and (often) conflicting values and constraints leads to a situation in which professionals and parents make decisions which ignore some important factors.

Although it may be frustrating, the experience of reviewing and revising a basic skills program can also be illuminating and can lead to clearer thinking and better decisions about basic skills instruction. The purpose of this collection of papers is to help schools and school districts achieve clarity in their planning.

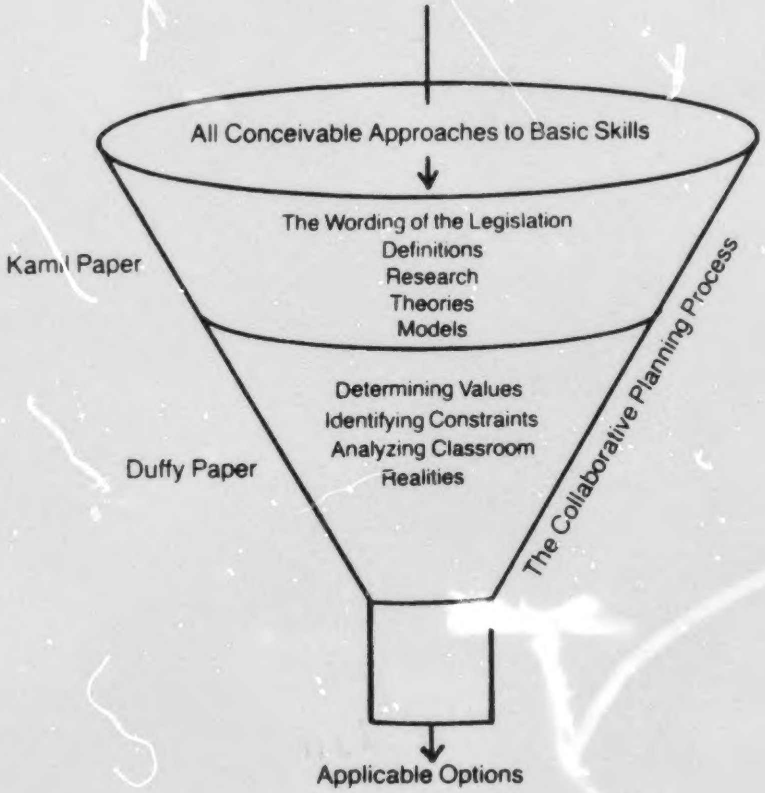
All Conceivable Approaches to Basic Skills
The Wording of the Legislation
Definitions
Research
Theories
Models
Kamil Paper
Determining Values
Identifying Constraints
Analyzing Classroom Realities
Duffy Paper
The Collaborative Planning Process
Applicable Options

Figure 1. The Process of Making Basic Skills Choices

References

Buike, S. *Would the Secret Reading Group Please Come to Reading Circle: A Study of Teacher Decision-Making*. A paper presented at the Annual Conference of the American Educational Research Association, Boston, April 1980.

Ignanovich, F.: Cusick, P.; and Ray, J. *Value/Belief Patterns of Teachers and Those Administrators Engaged in Attempts to Influence Teaching*. Research Series No. 43. East Lansing, Michigan: Institute for Research on Teaching, Michigan State University, 1979.

Morine-Dershimer, G. *Teacher Plan and Classroom Reality: The Smith Bay Study, Part IV*. Research Series No. 60. East Lansing, Michigan: Institute for Research on Teaching, Michigan State University, 1979.

Schwab, J. *Science, Curriculum and Liberal Education: Selected Essays*. Chicago, Illinois: University of Chicago Press, 1978.

Sendelbach, N., and Smith, E. *A Case Study of Activity Based Science Instruction and Its Antecedents*. A paper presented at the annual meeting of the American Educational Research Association, Boston, April 1980.

Yinger, R. *A Study of Teacher Planning: Description and a Model of Preactive Decision Making*. Research Series No. 18, East Lansing, Michigan: Institute for Research on Teaching, Michigan State University, 1978.

PREPARATION FOR AN ADULT LITERACY PROGRAM

Source: Organizing and Managing a Literacy Program: A Handbook by Don A. Brown (Ed.). (Office of Education, U.S. Department of Health, Education, and Welfare). Washington, D.C.: U.S. Government Printing Office, 1979.

Preparation for an Adult Literacy Program

The person charged with starting an adult literacy program often has difficulty finding helpful information on procedures. Although many people have worked in such programs, not many have had the experience of starting a good program and have then written to give others the benefit of their experience. When those who planned this Handbook directed their attention to the problem or organizing and managing programs, they decided to include a beginning chapter based on what leaders in adult literacy had learned about starting successful programs. They set out six steps which they felt were important to the successful initiation of literacy programs. Although some would change the order or would encounter circumstances necessitating the adaptation of some of the procedures, the basic content of the steps reflects a consensus of what is important in launching a literacy effort.

Step 1. Identifying key decision-makers and gathering their support No one should try to start a literacy program on his own.[1] Whether the initial idea was that of one person or a group of people, one of the first steps in starting the program should be to find who the key decision-makers are who can help with the effort. Personal contact should be made in each community with those who may lend support to the program.

One group of decision-makers would be those within the public sector. This might include the educational leadership from nearby community colleges, trade schools, secondary schools, non-traditional learning centers, and other educational agencies which might have an interest in such an endeavor. The organizer should not overlook the YMCA and the YWCA. One of the oldest adult schools in the nation was begun in the YMCA in Buffalo, New York. The organizer also should make contact with the library or libraries serving the community or area in which the literacy program will be situated. Library support is often of great value.

Another set of decision-makers within the public sector are the human resources agencies working in the community. Those heading vocational rehabilitation, employment, welfare, and the numerous special programs which may be in the area are often interested in improving literacy skills for their clients.

Although it varies with the location, it may prove valuable to contact those in the local, county, or state government to ascertain their interest in such a program. They not only are often interested but are able to provide expertise and assistance.

Those interested in starting a literacy program ought also to contact--in addition to the decision-makers within the public sector--those persons within the private sector to probe their interest and, it is hoped, secure their support. The private sector should include churches and synagogues. Pastors, priests, and rabbis frequently prove strong allies and provide trustworthy support. In some areas granges and labor unions are helpful. Businesses and industries, either individually or through the local offices of the National Alliance of Businessmen, frequently offer valuable assistance.

In addition, every locale has its own unique individuals and organizations which should be contacted for help. Only those who live in the area are likely to be aware of them. If the organizer is new to the community, it would be wise to talk with people who can point to individuals who would be most helpful in establishing early support and understanding for the program.

Step 2. Developing a task force or advisory council. After having 'sounded out' the community leaders and decision-makers, the organizer's next step is to gather those who may provide continuing advice and assistance in initiating and maintaining a literacy program. There are several advantages to having such a group. They can provide information about all sorts of things from *needs* to *resources*. If "two heads are better than one," then the number of heads available in a task force is absolutely indispensable. They can provide community feedback. They will, if they are properly chosen, provide a 'finger on the pulse' of the people in the area. Not only that, but they will begin to identify with the program and provide support if they are allowed to become a viable part of the adult literacy program. In short, if they are involved in decision-making, they will help the program director make correct decisions, avoid poor decisions, and shoulder a responsibility for the program within the community. These are important assists to any program.

The task force should represent a cross-section of the community. Some members should be chosen because they are leaders within the groups to be served by the program. Some should represent the public sector, others the private sector.

The director wants task force members who have the time and commitment to take an active part on the task force. There is a difference between making a *statement* of support and giving the actual time necessary to make the program effective. An ancient story is told about a hen and a pig discussing support for a worthy program. The hen suggested they each contribute--eggs from the hen and ham from the pig. The pig immediately demurred, pointing out, "On your part, it's a contribution. On mine, it would be total commitment!" The program directo needs those who are totally committed!

It is easy to allow the task force to become too large. Eight to twelve member works out well. When the number grows to twenty or more, members become reluctant to discuss things, even items they feel are important.

Among the first specific responsibilities of the task force are helping develop program objectives, suggesting resources, and giving general advice about a proper start in the community. It is important that the director show appreciation for the time spent by the task force members by including their names in the press re-

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[1] The editor recognizes the concern for identifying male and female persons in general references. But in lieu of a smooth solution we use the convention of a masculine pronoun when both male and female persons are included in a reference.

leases about the literacy program and by listing their names on charts showing the organization of the program.

Step 3. Assessing community needs for a literacy program. A community needs assessment may build on information already available. Public schools in the area often have information on the general make-up of the community. The state department of education may have figures on the levels of educational achievement of adults in the area. Secondary schools may have data regarding those who have dropped out of school before finishing high school, including the number who dropped out at eighth grade or before and for each year of high school. Armed forces recruitment centers may provide information on the number from the area who failed to pass the minimum educational requirements for induction into the service. Figures such as these allow the director and the task force to assess the need for a literacy program. Such information is invaluable in winning support from the community for an adult basic education effort. A chart containing the information acquired from a needs assessment should be hung on the director's office wall for easy reference. The form on page 5 may be used as a sample. The indicators called for on the form may or may not be available for a specific program, but other available data may indicate the need in the community or area. The director should adjust the chart to fit the situation.

The director and task force also need to determine precisely the location of the clients they hope to serve. The public schools are often able to pinpoint the areas of greatest need. They may even be helpful in describing the level of instruction wanted by clients within that area although it is more likely that such information will have to be obtained through polling a sample of that community or section. By conducting brief interviews with about 100 people, it is usually possible to estimate the general percentages of people wanting basic literacy, intermediate literacy, and high school equivalency instruction. Incidentally, the polling process can serve as a good means for advertising the program. Each person who is polled may be given a flyer or leaflet containing information about the program.

Step 4. Developing objectives. After identifying community needs, the director and task force should develop the objectives of the program. An objective is simply a statement that indicates a desirable outcome. The task force will need to consider ***program*** objectives, dealing with functional or managerial aspects, and ***instructional*** objectives which deal with what the program hopes to accomplish in terms of general student achievement.
Sample program objectives are

1. **A suitable facility will be located within the first month.**

Needs Assessment Summary

Name of the Adult Literacy Program: ______________________

Date: ______________________

Names of the Task Force members:
____
____
____
____
____

Director ______________________
____
____
____
____
____

Area ethnic/racial make-up:

_____% Native American
_____% Asian
_____% Black
_____% Mexican American

_____% Puerto Rican
_____% White
_____% other

Indicators of socio-economic status of the area:

_____% on Aid for Dependent Children
_____% unemployed
_____% receiving unemployment compensation

Needs Assessment Summary con't

Educational data:

Percentage of students dropping out of school last year

______% at 8th grade or below

______% at 9th grade

______% at 10th grade

______% at 11th grade

______% at 12th grade before graduation

Percentage failing minimum educational requirements for induction into the armed forces:

______% Air Force

______% Army

______% Coast Guard

______% Marines

______% Navy

______% Total

Years of schooling completed by adults in this area:

Number of adults:

______ 0-4 years of school

______ 5-8 years of school

______ 9 years of school

______ 10 years of school

______ 11 years of school

______ 12 years of school

______ 13 or more years of school

2. Three teachers will be recruited and oriented to the program within the first two months.
3. A tutor supervisor will be recruited and oriented to the program within the first six weeks.
4. At least twenty students will be recruited within the first two months.

Other program objectives may deal with obtaining funding, securing instructional materials, and other factors involved with establishing and maintaining the program.

Instructional objectives, on the other hand, relate to the student gains. Sample instructional objectives are

1. Seventy-five percent of those participating in the program for at least 100 hours of instruction will have gained one year or more in reading ability.
2. Fifty percent of those at the priority one level (lowest ability level) will reach the second stage of the adult performance level scale within 200 hours of instruction.

Additional instructional objectives could relate to the attainment of higher levels of literacy, mastery of specified clusters of survival tasks, improvement in basic skills, and ability to handle various levels of reading in English for those for whom English is a second language.

Neither the program objectives nor the instructional objectives should be confused with the *performance* objectives frequently used in planning an individual student's daily instruction. Both program and instructional objectives, as they have been discussed here, relate to overall aims. Performance objectives usually relate only to an individual student or to small groups of students working together on the same skill or other element of reading mastery. Performance objectives, obviously, would not be a concern of the director and the task force.

Step 5. Locating resources. After the director and the task force have developed the objectives for the program, they must turn their attention to the problem of locating the necessary resources, both human and physical, for accomplishing those objectives. It is not possible to operate a program without competent people to teach the students, coordinate the program, recruit those who can benefit from the program, and do the various things essential for a successful program.

Staff needs vary with the size of the program. A small program may function quite well with a lead teacher/director and one or two teachers or tutors. A large program may need a director, an associate director, a staff of professional teachers, a sizeable number of volunteer or paid tutors, a tutor coordinator, a tutor supervisor for each 8-12 tutors, one or more secretaries, a clerk to keep track of records, counselors, a psychometrist or test administrator, a person in charge of child-care aids to assist in the child-care center, a student recruitment coordinator, recruiters, a coordinator for the library/media center, an instructional coordinator, a staff development coordinator, a public relations director, maintenance supervisor, and one or more custodians. Although the areas represented by the above positions must be considered even in an average-size adult learning center, usually several positions are assigned to one person. For example, the associate director may be responsible for instructional coordination, staff development, and tutor coordination.

In organizing a new adult literacy program, it may be helpful to identify *immediate* staff needs, appointing other positions as the need for them becomes apparent.

It is helpful to decide beforehand the qualities the director should look for in selecting staff. Three qualities are of major importance: 1. the ability to get along well with ABE students, 2. the ability to get along well with staff members, including the director, and 3. a good knowledge of the jobs staff members perform. Other desirable qualities include flexibility, patience, dependability, cleanliness, vitality and enthusiasm, and punctuality. Sometimes it is easier for a tutor or teacher to get along well with the students in the program if they are from the same ethnic group or the same locality, but not always. Sometimes a teacher's warmth and friendliness are enough to overcome all obstacles, making students forget differences in racial background or locale.

The task force often assists in finding staff members. They usually know the area and the people in it. Even if they do not know the names of specific people, they often know someone who does. Good rules to observe in finding staff members include: 1. making needs known, 2. recruiting actively through phone calls to those who can provide leads and through lead followups, and 3. placing notices where they will attract attention or sending them to churches and civic organizations. The selection of a good staff is one of the most important actions taken to insure a strong program. It should not be left to chance.

Institutional resources involve housing for the program. An adult learning center must have an adult atmosphere that includes a place in which to make coffee and buy soft drinks. There should be an area for smoking. The instructional area should have flexible seating--preferably tables and moveable chairs. The atmosphere should be warm, light, and inviting. The center should be accessible, if possible, close to the students who will use it. It is best if the center can be reached by public transportation. Parking should be available and the area lighted if it is used at night. The facilities should be available ordinarily during the evenings and for special occasions like award nights and special holiday dinners. The facility must be architecturally accessible to disabled students which would probably preclude buildings with stairs and no elevators. There should also be parking and restroom facilities for the disabled. Otherwise, the learning center will not be in compliance with the law.

The facilities will need telephones, typewriters, tables, chairs, and kitchenette equipment. Other adjuncts to the instructional program include chalk boards, projectors, screens, and a ditto machine or other duplicator. In addition, direct instructional materials and supplies are pencils, pens, paper, duplicator masters, erasers, paper clips, thumb tacks, rulers, and a variety of adult instructional materials.

Although these materials usually may be purchased through the program budget, there are times when the budget can cover only the salaries of the staff. When this is the case, the director and the task force must find the necessary supplies elsewhere. In the initial stages of the program, neighborhood betterment organizations, veterans groups centered in the area of the program, and businesses and industries often help.

It is frequently helpful to seek advice and assistance from state and national offices that deal with adult basic education. The Right-to Read Effort and the Adult Basic Education offices within the United States Office of Education, or the state equivalents of these offices within the local state departments of education, can often help with specific questions and problems faced by the director of a new literacy program. In addition, the Educational Retrieval and Information Centers (ERIC) can provide information on a variety of subjects. Most libraries can assist anyone who wants to make use of ERIC.

Step 6. Funding. Without money, the program stops. Every program director must be concerned to some extent about sources of funding. Garrett Murphy, the director of an adult learning center in Albany, New York, says it is his primary responsibility as director to try to maintain an adequate level of funding so that the center can keep its doors open.[1]

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[1] Brown, Don A., IRA Model ABE Programs, 'Adult Learning Center, Albany, New York,' International Reading Association, Newark, Delaware: IRA, 1975.

But where does one look for funding? Many sources provide support for literacy efforts. They include federal, state, and local agencies; foundations; private businesses and industries; and nonprofit agencies. Funds may be provided through grants, contracts, and sometimes as gifts. Thus, sources of funding may be varied.

The federal government, which shoulders a major portion of funding for the country's literacy effort, usually advertises for those who want to *contract* for federal monies in the *Commerce Business Daily.* The federal government advertises the availability of *grants* through announcements in the *Federal Register.* Most United States Office of Education programs addressing literacy make funds available through discretionary grants. Persons seeking such funds may write to the specific office for application information. For example, if one were interested in a Right-to-Read adult program, information could be obtained by writing directly to the Right-to-Read Office in Washington, D.C.

It is important to follow the directions carefully in writing a grant proposal. Procedures call for nationwide competition for most grants so that careful adherence to instructions is essential if the proposal is to have a fair chance. Requirements for funding and the criteria by which each proposal will be evaluated are contained both in the advertisement in the *Federal Register* (for grant proposals) and in the grant proposal information supplied by the program. Most programs have a set date by which all proposals must be submitted. If a proposal is late, it will not be considered.

If a proposal is submitted but not selected for funding, it is possible to request the comments of those who reviewed the proposal. Reviewing the comments is often helpful in improving the next proposal submitted.

The following checklist may aid in reviewing a proposal before submitting it:

Is the applicant eligible according to the proposal guidelines?

Does the proposal fall within the aim of the legislation?

Does the proposal meet each of the evaluative criteria?

Does the proposal assure compliance with the applicable civil rights laws and other federal laws and regulations requested in the guidelines?

Does the proposal include the budget information and work statements for multi-year funding, if applicable?

Although most funding for adult literacy programs comes from federal sources, a number of other agencies and organizations concern themselves with literacy problems. As the local director seeks funding, the state director of Adult Basic Education may point out church groups, businesses, industries, foundations, ethnic groups, and even private individuals who might be interested in helping. Many businesses and foundations will contribute within their geographic areas, thus eliminating the national competition for funds. Many states have their own funds to ai in the organization and establishment of new educational efforts. A number of loca school districts have begun to earmark funds for basic education for adults as well as children. Some unions make educational betterment one of their aims, and they are sometimes willing to help finance programs which union members may use to improve their basic educational level. And as mentioned, some church organization are influential in their efforts to improve adult literacy. The director may also wan to explore the possibility of securing funding through the United Way. In many places, this has become an ongoing source of support.

Each of the groups mentioned have slightly different approaches to funding. Some groups want only simple two-or-three-page proposals with a budget itemizing the purposes for which the money is to be used. Others, especially some of the foundations, want more comprehensive proposals. Most proposals, however, are less complicated than governmental proposals.

An additional means of financing a literacy program is through private fund-raising. Although it is difficult to underwrite completely a sizeable program throug private fund-raising, it is often possible to pay for certain equipment and supplies or to raise the money for specific needs through such an endeavor. The director, as he investigates the feasibility of private fund-raising, should seek the advice of an individual in the community who may have done something similar. Church lodges, veterans' groups, and other organizations may have had some success with fund-raising. Usually, one person is responsible for that success. The assistance of an experienced fund-raiser in organizing a money-making activity for a program usually enhances the possibility of a successful event. Even the choice of activity may be left largely to the fund-raiser.

Independent fund-raising has an obvious advantage. No one will establish rules and regulations on how the money may be spent--materials, salaries, equipment, or what have you. The director and task force are free to use the money in ways most advantageous to the program.

One last point relates to funding. Many organizations and individuals have n *money* to contribute but willingly give furniture, equipment, books, or materials. A program should not look as if it were outfitted at a local garage sale. Many contributed items, however, are helpful and acceptable. Coffee makers and furniture for a lounge area, paperbacks and books for the library, even items like a desk and chair for the office may be donated if the needs of the program are known. Some centers supply a 'Christmas list' of items the new program needs, circulating it to those who are interested in the effort.

Summary. Leaders in adult literacy have found certain steps important in establishing successful programs. First, key people in the community should be identified and their support secured. Second, a task force which is representative of the community and willing and eager to serve should be appointed. Third, the needs of the community for a literacy program should be firmly established. Fourth, clear-cut program objectives should be developed. Fifth, the resources necessary to carry out the program and accomplish the objectives should be located. Sixth, persons most in need of the services provided by the program should be identified. And, seventh, funding should be secured for the program.

* *

Adult Performance Level Study--

Objectives for Functional Competency*

Occupational Knowledge

Goal: To develop a level of occupational knowledge which will enable adults to secure employment in accordance with their individual needs and interests

Objectives:

1. To build an oral and written vocabulary related to occupational knowledge
2. To identify sources of information (e.g., radio broadcasts, newspapers, etc.) which may lead to employment
3. To define occupational categories in terms of the education and job experience required, and to know minimum requirements of given occupations
4. To be aware of vocational testing and counseling methods which help prospective employees recognize job interests and qualifications
5. To understand the differences among commercial employment agencies, government employment agencies and private employers
6. To prepare for job applications and interviews
7. To know standards of behavior for various types of employment
8. To know attributes and skills which may lead to promotion
9. To know the financial and legal aspects of employment
10. To understand aspects of employment other than financial which would affect the individual's satisfaction with a job.

Consumer Economics

Goal: To manage a family economy and to demonstrate an awareness of sound purchasing principles

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*Source: Northcutt, Norvell, and others, *Adult Functional Competency: A Summary* (Austin: The University of Texas at Austin, Division of Extension, Industrial and Business Training Bureau, 1975).

Objectives:

1. To build an oral and written consumer economics vocabulary. This should be an ongoing process through each objective
2. To be able to count and convert coins and currency, and to convert weights and measures using measurement tables and mathematical operations
3. To understand the concepts of sales tax and income tax
4. To be aware of the basic principles of money management, including knowing the basics of consumer decision-making
5. To use catalogs, consumer guides, and other reference documents to select goods and services
6. To be aware of factors that affect costs of goods and services and to determine the most economical places to shop
7. To be aware of the principles of comparison shopping, and to be aware of the relationship of price to quality among brand names, and between "first" and "seconds" and to be able to substitute economy for quality according to individual needs
8. To know the various methods by which goods are packaged and to know which methods are most cost-effective in terms of quality and storage
9. To be able to take advantage of sales by knowing where to find them, by planning for their eventuality, and by being able to determine which are of worthwhile value to the individual
10. To be aware of advertising techniques and to recognize appropriate and inappropriate forms of selling and advertising
11. To know how to order food and to tip in a restaurant
12. To be aware of different stores where home furnishings can be purchased and to determine the best buys for essential and luxury items based on individual needs and resources
13. To determine housing needs and to know how to obtain housing and utilities based on those needs
14. To know how to buy and maintain a car economically
15. To know basic procedures for the care and upkeep of personal possessions (home, furniture, care, clothing, etc.) and to be able to use resources relating to such care
16. To know the various media of exchange and to be familiar with banking services in the community
17. To develop an understanding of credit systems
18. To collect information concerning the types of insurance available and to be able to select the best insurance for the individual and his family
19. To know the resources available to the consumer in the face of misleading and/or fraudulent product/service claims or tactics
20. To understand the implication of consumption vis-a-vis finite world resources and to recognize that each individual's pattern of consumption influences the general welfare

Health

Goal: To ensure good mental and physical health for the individual and his family

Objectives:

1. To develop a working vocabulary related to health, especially as it relates to basic medical and physiological terminology, for accurate reporting of symptom and following a doctor's directions in applying treatments
2. To understand how basic safety measures can prevent accidents and injuries and to recognize potential hazards, especially as such hazards relate to home and occupational safety
3. To know medical and health services in the community
4. To understand the physical and psychological influences of pregnancy as well as the need for proper pre-natal care
5. To understand the importance of family planning, its physical, psychological, financial and religious implications and to have knowledge of both effective and ineffective methods of birth control
6. To understand general child rearing practices and procedures for guarding the health and safety of a child and to apply proper action in accordance with needs and resources
7. To understand the special health needs and concerns of the adolescent (and his parents) and to become acquainted with some ways to ease the transition from childhood to adulthood
8. To understand what contributes to good mental and physical health and to apply this understanding toward preventive care and health maintenance
9. To understand the interaction of self as a member of small groups (family, work, club, class) and to use this understanding to promote effective interpersonal coping skills
10. To be able to apply first aid in emergencies and to inform proper authorities of sudden illnesses, various accidents or natural disasters
11. To plan for health or medical insurance and to be aware of available financial assistance for medical or health problems

12. To understand what constitutes a proper diet and to plan meals according to individual needs and resources
13. To understand federal control of various drugs and items for health protection and to understand how public reaction influences this control

Government and Law

Goal: To promote an understanding of society through government and law and to be aware of governmental functions, agencies, and regulations which define individual rights and obligations

Objectives:

1. To develop a working vocabulary related to government and law in order to understand their functions in society and in the personal life of the individual. This should be an ongoing process as each objective is covered
2. To develop an understanding of the structure and functioning of the federal government
3. To investigate the relationship between the individual citizen and the government
4. To understand the relationship between the individual and the legal system
5. To obtain a working knowledge of the various legal documents which the individual will need as a member of society
6. To explore the relationship between government services and the American tax system

Community Resources

Goal: To understand that community resources, including transportation systems, are utilized by individuals in society in order to obtain a satisfactory mode of living

Objectives:

1. To build an oral and written vocabulary pertaining to community resources and to define community resources in terms of (a) services to community members and (b) services to persons outside the community or non-self-supporting members of society (unemployed, criminals, insane, etc.)

2-3. To know the types of community services provided for members of society including the purposes of and how to gain access to these services

4. To understand how and when to apply for community services, such as Social Security and Medicare

5. To know various recreational services available in the community
6. To be able to utilize information services of the community
7. To be aware of the people and agencies in the community whose job it is to register and act upon citizen complaints

Subset: Transportation

8. To build an oral and written vocabulary of transportation terms, including ca insurance terms
9. To be able to recognize and utilize signs related to transportation needs
10. To develop a familiarity with transportation schedules, and to calculate fares
11. To be able to find and utilize information facilities
12. To learn the use of maps relating to travel needs
13. To recognize time zone boundaries and understand the concept of daylight saving time
14. To request information on and make verbal and written travel and overnight accommodations/reservations
15. To understand the relationship betwen transportation and public problems
16. To understand driving regulations, including safety, courtesy, and rules suc as having a driver's license, car license plates, etc.

Initial Operation Procedures

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Source: Adult Literacy Program Handbook - A Compilation of Reading Academy Program Experiences by Andres R. Montez (Ed.) and Stephen Thom. (Office of Education, U.S. Department of Health, Education, and Welfare, Stock Number 017-080-0917-5). Washington, D.C.: U.S. Government Printing Office, (n.d.).

Definition of Terms
Initial Operation Procedures

Functional Illiteracy:	The absence of reading and oral communication skills necessary for effective functioning in society
Goal:	The solution to the problem stated in general terms; here the reduction of functional illiteracy in youths and adults within the service area
Needs Assessment:	A formal or informal collection of data to identify the target population, determine educational needs, and isolate any other factors relevant to ultimate program success.
Objective:	A specific, measurable program outcome expressing what is to be accomplished, for whom, when, and how it will be evaluated
Operation Management System:	Methods of accomplishing objectives, including program structure, administration, job design, and evaluation
Service Area:	The geographic area to be served by a particular literacy program
Target Population:	Those youths and adults within the service area whose reading or speaking skills render them inadequately prepared to function in society and who are the main focus of the program
Time Line:	Projection of completion dates for program objectives, expressed graphically.

"If you're not sure where you're going, you may end up somewhere else!"

Introduction

The number of illiterate individuals in the United States is astounding. The number of dollars allocated to alleviate the problem are limited. But, the human resources potentially available and the possible approaches to combatting it are limited only by the energy, enthusiasm, and creativity with which we as persons interested in literacy programs face the challenge. With this in mind, the decision was made to collect, organize, and record the information that our collective experiences as Right to Read Reading Academy Directors have uncovered. This first section discusses initial planning. Your particular situation will undoubtedly necessitate discarding some of the following suggestions and adapting others, but it is hoped that some of the sharing will help contribute to efficient program planning.

Needs Assessment

A. Rationale

The most salient reasons for using a needs assessment instrument to structure a literacy program are these:

1. If you don't know where the needs of the community lie, efforts of the program personnel will be largely misdirected.
2. Only by recognizing needs can objectives be established and an evaluation system become an integral part of the program.
3. The contact made with agencies when doing the assessment will make them aware of who you are. Furthermore, the favorable attitude resulting from participation in initial planning rather than external imposition of another program in the community is of vital importance to eventual success.
4. A demographic survey will enable establishment of satellite sites in, close to, or convenient to areas of greatest concentration of the target population.
5. The process of assessing needs will put you in contact with other organizations offering similar or conjunctive services. Awareness of each other's existence can avoid duplications and possibly lead to a sharing of resources, facilities, materials, staff development and training sessions, mutual referral of clients, and joint publicity campaigns.
6. When the time comes to seek other sources of funding, whether it be government or foundation grants, individual or corporate contributions, it is essential to have statistics on community needs and the degree of success the program has experienced in meeting them.

B. Identification of Needs

The process of carrying out a needs assessment survey is not overwhelmingly difficult, but it does require time and careful planning. Often a local university or corps of professionals will volunteer their expertise to non-profit organizations. Although these organizations have different names and different sponsoring agencies in each city (VITA-Volunteers in Technical Assistance and Action's Technical Assistants), they can usually be located by contacting your local United Way chapter.

1. PREPLANNING PHASE

This phase involves determination of what information is required, how it will be gathered, and by what means it will be interpreted. Some Academies have found that contracting consultants for this task is well worth the expense.

2. SOURCE OF DATA

a. Nationally published studies

Refer to the Appendix for a list of relevant national needs assessment studies and addresses for obtaining copies of the results.

b. Demographic information on your target area

A list of State and local organizations who generally have access to statistical data on adult literacy is also in the Appendix.

c. Surveys conducted by Program personnel

Although data collected by other organizations is useful, you will probably have to add information collected with potential program services specifically in mind to obtain the necessary data. (Several Directors mentioned that despite extreme familiarity with the target area, needs assessment data illuminated some surprising realities.)

1) Interviews of potential participants and students currently enrolled in Adult Basic Education and English as Second Language classes. Questions should be structured to:

a) identify the adult population by age, race, sex, educational and employment status,

b) determine educational needs as perceived by the population,

c) identify factors of the target population that may affect their success in learning (especially needs for finding employment, babysitting services, and transportation),

d) identify educational programs currently available to adults, awareness of these programs, and attitudes toward them. This is important when consideration is being given to establishment of satellite centers. Trying to set one up in a neighborhood where similar services exist will not only insure difficulty in securing students, but it will antagonize the agency whose 'territorial rights' have been violated. (See chapter appendix)

2) Mail survey of employers (see chapter appendix)

3) Mail survey of social service and educational agencies (see chapter appendix)

A carefully chosen task force, including representatives from the sponsoring agency, specialists in adult education, the State Right to Read office, business, cooperating agencies, and the student and tutor population will not only offer invaluable advice regarding determination of needs, but will also aid in collecting needs assessment data.

C. Prioritizing Needs

The process of prioritizing needs involves consideration of some of the following criteria:

1. total numbers of functionally illiterate youths and adults in service area,
2. non-English speaking populations,
3. racial differential,
4. age differential,
5. geographical distribution,
6. estimated income level of target groups,
7. attitudes of target population about educational programs,
8. employment profiles,
9. location and thrust of similar services—
    bus lines, day-care facilities,
    health clinics, senior citizens lunch
    housing projects, programs, actions
    recreation centers, centers
10. facilities and human resources available,
11. budgetary limitations on staff and materials,
12. funding Agency regulations and policy,
13. monies potentially available so that programs may continue after termination of funding.

Particular literacy programs will have to determine the relative weight of the various criteria.

Determination of Objectives

A. Translation of High Priority Needs into Objectives

This phase of program planning is a natural outgrowth of need prioritization. Consideration of the above factors will help answer questions regarding program structure and size, location of the

Academy and satellite centers, need for an English as a Second Language (E.S.L.) component, source of instructors, and methods of participant recruitment. By this time it will not be difficult to state objectives in terms that are specific enough to be evaluated and realistic enough to be achieved. At this stage of program planning, objectives should be divided into three types.

B. Categories of Objectives

OPERATIONAL—These relate to the administrative functioning of the program
i.e. "Through public media and agency referrals, recruit 25 new clients each quarter and inscribe in the program."

INSTRUCTIONAL—These relate to the degree of learning expected to occur.
i.e. "Of those clients remaining in the program at least 6 months, 60 percent will improve one reading level as measured by standardized tests."

PRODUCT—These refer to physical materials or literature that come out of the program.
i.e. "A Tutor's Manual will be prepared and reproduced by staff within 3 months of program initiation date."

2. Objectives may be further divided into cognitive and affective, and will generally relate to staff members as well as clients. Some examples of affective objectives might be:

a. "All staff members will attend at least one workshop to improve sensitivity to students' needs and frustrations and resultant behavioral changes will be measured by student input."

b. "Fifty percent of the students will improve reading for pleasure as judged by questionnaires and staff observation."

It should be kept in mind that objectives must be specific, measurable, attainable, relevant and behavioral. They should clearly express *what* is to be accomplished, *for whom, when*, and *how* accomplishment is to be measured. Certain types of objectives in the affective realm are difficult to measure, however, they should be stated in terms that are as specific and measurable as possible. In deciding what areas you wish to address in the affective domain, it may be useful to refer to the section on forms to see what kinds of questions other similar projects have used to determine attitudinal and behavioral changes. Also, the chapter on evaluation gives detailed suggestions on formulation of project objectives with an emphasis on how they are intrinsically tied to mechanisms for evaluation.

One final word on determination of objectives: since we all know what happens to the "best laid plans of mice and men," it would be prudent to consider potential barriers and plan for alternative solutions to problems.

Operational Management System

A. Introduction

For the purposes of program administration, "Operational Management System" has been defined as the methods for accomplishing and evaluating program objectives. What it includes, in actuality, are all the topics discussed in this Handbook. Therefore, this chapter will touch on organizational strategies with reference to other chapters and outside resources that deal with management systems.

B. Methods

Having determined program objectives by identifying and prioritizing needs, the next step is to decide how best to accomplish those objectives; that is, what methods will be most effective in solving the problems that have been identified. Just as every literacy program has a different situation and slightly different problems, all of us have to decide individually what the best methodologies for solving those problems will be. Generally, however, selection of methods should be preceded by these questions:

1. Who is working on similar problems in your community and which techniques seem to be the most successful?
2. Which of these programs are most successful in accomplishing what they set out to do?
3. What methods have been tried in the past and with what results?
4. What are the limitations imposed by budget, time, and resource constraints?

It may be necessary to employ different methods for different components of the program or for different sections of the service area. In addition, second and third choice alternatives should be considered since you are probably dealing with a number of unpredictable variables.

C. Structuring the Program

Once the methodologies are decided upon, the remainder of the progam can be structured. You will want to consider necessary activities relative to program functioning, delegation of responsibilities, creation of job designs, administrative hierarchy, communication channels, and evaluation procedures. The following chapters give excellent suggestions in each of these areas but the reader is particularly referred to the chapters on "Job Description" and "Staff Development" for program structuring and job design, and the chapter on "Evaluation" for tying determination of program objectives to evaluation procedures.

To sort out the tasks that lie ahead and to clarify their inter-relationship, it may be helpful to make a simple four-column chart with the headings:

Problem	Objective	Methods	Evaluation

In this way you can check at a glance and be sure that every problem is handled; that appropriate methodology is established for accomplishing each objective, and that the evaluation mechanisms are built in from the beginning.

D. Time Line (see chapter appendix)

Another device for ensuring task completion is the time line. This is simply a graphically formulated projection of target dates for the accomplishment of various objectives. It may take various forms, but one example of a graph style time line is included in the Appendix. Target completion dates are obviously not ironclad, however, they will help keep you on track and will make the staff aware of program directions, activities, and deadlines. One cautionary word: Try to be realistic in planning activities and time frames. If your program receives funding from an agency, you will be accountable for unmet deadlines.

In preparing time lines for the accomplishment of activities, it must be kept in mind that not all objectives will have a target date, and not all can be put on a time schedule. For example, many of the operational objectives will be ongoing; the product objectives can be assigned a target completion date, but the instructional objectives often cannot. The following list will exemplify how objectives might be planned within time frames.

One Time—	Submit grant application
	Publish Tutor's Manual
	Prepare E.S.L. Achievement Tests
	Open Four new Satellite Centers
	Write Student and Tutor Contracts
	Prepare Slide Presentation
Daily—	Reading Tutorial Sessions
	E.S.L. Classes
Weekly—	Orientation for New Tutors
	Staff Meeting
	Placement of Students with Tutors
	Follow-up Phone Calls
Bi-Weekly—	Training workshops for Reading and E.S.L. Instructors
	Speeches to Community Agencies for Recruitment of Participants
Monthly—	Newsletter
	Monthly Report to Sponsoring Agency
	Monthly Calendar of Events
	Student Progress Reports submitted by Tutors
	Task Force Meeting
Quarterly—	Intensive Recruitment Campaign
	Student Testing
	Certificates of Achievement Presented
	Budget Review
Semi-Annual—	Performance Narrative and Financial Reports due
	Tutor Appreciation Activities
Annual—	Application for Continuation Grant
	Report to Sponsoring Agency

In formulating the time line, be sure to anticipate future years' program operation including projected growth and potential additions. A time line for budgetary activities may be incorporated into the program activities time line or stated separately, depending on whether the Project Director is also responsible for the budget. To supplement the Time Line, some Academies have made use of monthly Calendars (see chapter appendix). These might include such activities as:

1) accomplishment of objective components occurring on a weekly or monthly basis and
2) workshops sponsored by other organizations, social activities, and radio, television, and newspaper coverage of the program; anything of particular interest to staff and participants

To conclude, careful planning will not only help you as Project Director to accomplish objectives, but it will also encourage staff and students to set goals, to make time frames for their accomplishments, and facilitate the learning process.

Initial Operation Procedures
Checklist

Determine community needs
- Collect data from previous needs assessments ____________
- Obtain additional information needed for target area through surveys of potential participants, employers, and service agencies ____________

Prioritize needs ____________
Formulate program objectives ____________
Select methods to accomplish each objective ____________
Read remaining chapters of this Handbook before determining program structure and activities! ____________
Develop Time Line ____________

Appendix

Adult Literacy Program—Time Line
(Sample)

Agency: ________________________________
Initiation Date: ________________________________

Activities Relevant to Accomplishment of Program Objectives	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June
Task Force Meeting		▲			△			△			△	
Intensive Recruitment Campaign			▲			△			△			△
Student Testing			▲			△			△			△
Certificate of Achievement Presentations	▲			△			△			△		
Performance Narrative and Financial Reports	▲						△					
Tutor Appreciation Activities			▲				△				△	
Application for Continuation Grant.									△			
Annual Report to Sponsoring Agency						△						
Publication of Tutor's Manual		▲										
Open New Satellite Center			▲		△			△				△

Once an activity has been completed, the corresponding triangle is blackened.

Adult Literacy Program—April Calendar of Events

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
					1 Final Day Recruitment Campaign March Monthly Report to Library due Awards Night	2 Metro State College Workshop "Politics of Agency Survival" "Conflict Resolutions"
3	4 ESL Registration for Spring Term (April 4-8) ESL Testing & Placement Reading Testing diagnostic or progress	5 Registration Testing	6 Registration Testing	7 Registration Testing	8 Good Friday	9 "Noticias" Radio Program Focus on Denver Right to Read
10 EASTER	11 ESL Classes Begin Open Satellite Center—Westwood Library	12 Reading Workshop 1:30-4:00 Byers	13 Reading Workshop 6:30-9:00 Del Pueblo	14 'Esta Semana' TV Show Featuring Right to Read	15 Student-Tutor Softball	16 Adult Educ. Resource Center Workshop Curriculum Materials Auraria College 9:00-2:00
17 KLZ Radio "Chicano Today" Interview Right to Read Student and Tutor 8:15 A.M. to 10:30 P.M.	18 Bilingual Driver's Education Part I 6-9:30 Del Pueblo School	19 Bilingual Driver's Education Part II 6-9:30 Del Pueblo School	20	21 Task Force Meeting 11:00-1:00 P.M.	22 Student-Tutor Softball	23 ESL Workshop 10:00-3:00
24 Tutor Appreciation Wine-Tasting 2:00-6:00 P.M. The Pines Apt.	25 Reading Workshop 1:30-4:00 Byers	26 Reading Workshop 6:30-9:00 Del Pueblo	27	28 May Newsletter and Calendar	29 Student Progress Reports Due Student-Tutor Softball	30 ESL Workshop 10:00-3:00

List of Organizations Providing Needs Assessment Data

1. Appalachia Adult Education Center
   Bureau of Research and Development
   Morehead State University
   UPO 1353
   Morehead, Kentucky 40351

   "Areas of Information Need"
   "Assessing Community Services"
   "Coping Skill Categories for Disadvantaged Adults"

2. International Reading Association
   800 Barksdale Road
   Newark, Delaware 19711

   Journal of Reading
   Reading Research Quarterly
   "Right to Read '77"—Bimonthly report and Bibliography by IRA under contract with the Office of Education

3. National Advisory Council on Adult Education
   U.S. Office of Education
   400 Maryland Avenue, S.W.
   Washington, D.C. 20202

   "Target Population in Adults Education, 1974"

4. National Assessment of Educational Progress
   Education Commission of the States
   700 Lincoln Tower Building
   1860 Lincoln Street
   Denver, Colo. 80203

   Annual Indices: List of publications on State and Local Assessment, Testing, Career and Occupational Development, Basic Skills

   "Functional Literacy: Basic Reading Performance," Brief summary and highlights of an assessment of 17-year-old students in 1974 & 1975. Prepared for the National Right to Read Office

5. National Association for Public Continuing and Adult Education
   1201 Sixteenth Street, N.W.
   Washington, D.C. 20036

6. National Center for Adult Statistics
   U.S. Office of Education
   400 Maryland Avenue, S.W.
   Washington, D.C. 20202

   "Statistical Report on the Condition of Education, 1978"

Suggested Agencies to Contact to Obtain Statistics on Local Adult Illiteracy

STATE

Boards of Community Colleges and Universities
Legislature
Professional Education Associations
Right to Read State Office
State Department of Adult Education

LOCAL

Business and Industry
Census Bureau
Department of Social Services
Newspapers, Radio and TV Stations
Task Force for the Adult Literacy Program

NOTE: The Right to Read Assessment and Planning Handbook included here provides a step by step approach to educational program planning and revision. Although the Right to Read Handbook and worksheets are designed for programming in reading, they have potential for use in mathematics, writing, and oral communication. The flow chart identifies and presents in sequence the major components for planning and revising an educational program. The accompanying worksheets are tools to guide program planners through the process. Depending on the scope of the efforts to be undertaken, one may not find it necessary to use all the worksheets in their entirety. In some situations, it may be more appropriate to revise or substitute the worksheets or to select only a few for use. This resource serves as an example and a point of reference for individuals with the responsibility of planning and revising basic skills improvement programs, whether they be in reading, mathematics, writing, or oral communication.

RIGHT TO READ

ASSESSMENT AND PLANNING

HANDBOOK

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Caspar W. Weinberger, Secretary
Virginia Y. Trotter, Assistant Secretary for Education

Office of Education
T. H. Bell, Commissioner

This publication is based on materials developed by U.S. Office of Education Right to Read staff and as parts of contracts carried out by Learning Achievement Corporation of Los Angeles, California, and Contemporary Research, Incorporated of Palo Alto, California. Revisions of the original materials were made by members of a Right to Read Task Force.

This publication does not necessarily reflect the position or policy of the U.S. Office of Education, and no official endorsement by the U.S. Office of Education should be inferred.

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FOREWARD

The RIGHT to Read as a fundamental goal can only be realized if the individual needs of our children and adults are met.

As a National Effort, Right to Read is designed to prevent and eliminate reading-literacy difficulties; utilizing the resources (human, technical and financial) of government and the private sector. Its mission is to reach those who cannot read, as well as those who can, but are not reading. Individuals, groups and agencies can play a vital role.

The Right to Read Assessment and Planning Handbook is a document for use by those committed to analyzing the status of a local reading program and systematically seeking and developing solutions. It is a comprehensive approach to modifying existing practices and processes.

We in the Right to Read Office recommend it for your use as partners in a combined thrust to solve a major social and educational problem; thereby insuring the RIGHT to Read to all.

Ruth Love Holloway
Director
Right to Read Effort

INTRODUCTION

RIGHT TO READ
ASSESSMENT AND PLANNING HANDBOOK

for use by
An Individual School Building

> The principal expects all teachers to teach every child to read;
> All teachers expect every child to learn to read;
> Every child expects to learn to read.
>
> L. L. Cummins

RIGHT TO READ is a commitment — a solemn promise that we as a nation will do all in our power to see that individual expectations are fulfilled. This commitment provides motivation to implement at all levels of instruction the best that is known about the teaching of reading. As a tool to implement program review and planning, this Handbook may serve as a valuable guide.

The Right to Read Assessment and Planning Handbook with the accompanying charts are designed to assist individual schools:

(1) to examine the current reading program

(2) to select and rank program priorities

(3) to compare the current program with "Standards of Excellence" (criteria for good reading programs) and with successful reading programs and practices

(4) to state goals and objectives which apply to the individual school

(5) to plan appropriate steps to implement a more effective reading program.

Curriculum is developed and programs are planned as a result of involving school personnel in deliberations. These deliberations take into account the many variables in a particular situation. They can consider what the program is now and what the school wants the program to be. How to get from where you are to where you want to be is achieved by continuing the planning process.

The form and content of the Planning Handbook were suggested by U.S. Office of Education research reports, including "Information Needs Relating to Reading Achievement Improvement" (Scientific Education Systems, Inc., Oct. 1971) and "The Information Base for Reading" (Reginald Corder, Educational Testing Service, Berkeley, California, 1971). From these sources as well as from contacts with school and reading specialists, several basic assumptions about program planning have emerged:

(1) School personnel have at their disposal a significant amount of data on reading achievement and attitudes.

(2) Data to be incorporated into the reading program assessment should be that which can substantially and realistically aid the school in making necessary decisions.

(3) Program assessment, in the sense in which it is used by Right to Read, requires consideration of an array of context variables (teachers, materials, attitudes, non-school resources) in relation to some desired (though not immediately stated) goal. Thus, data are called for which will be used later to determine the objectives of the reading program in this school as well as the resources required to reach those objectives.

(4) The majority of decisions the school must make probably will not require information from the diagnostic profiles of individual students. Rather, information concerning group performance in a number of gross sub-areas of reading is required. However, actual implementation of a reading program does require diagnosis of each individual student's particular reading situation.

SUGGESTED PROCEDURES FOR USE

The Handbook may be thought of as a programmed self-study guideby which a committee or task force may follow a step-by-step procedure of collecting data and making decisions. Each member of the Task Force should have a copy of the Handbook and should record the information as it is discussed. The charts may be used to summarize committee conclusions to make a display and to use as a means of sharing findings and reporting recommendations.

The appendix is an integral part of the Handbook. It includes working papers such as a summary of the purpose of the charts, suggested forms to assist in the process, definition of terms and other helpful materials. There will be frequent references to the appendixes with suggestions for their use.

A Task Force should be set up to carry out the assessment and planning procedure and to monitor the program continually. That Task Force should include the principal of the school, two representative teachers, the librarian, at least two representative parents, a representative from the central administrative office, representatives that seem appropriate, i.e., community leaders, education association leaders, and business leaders.

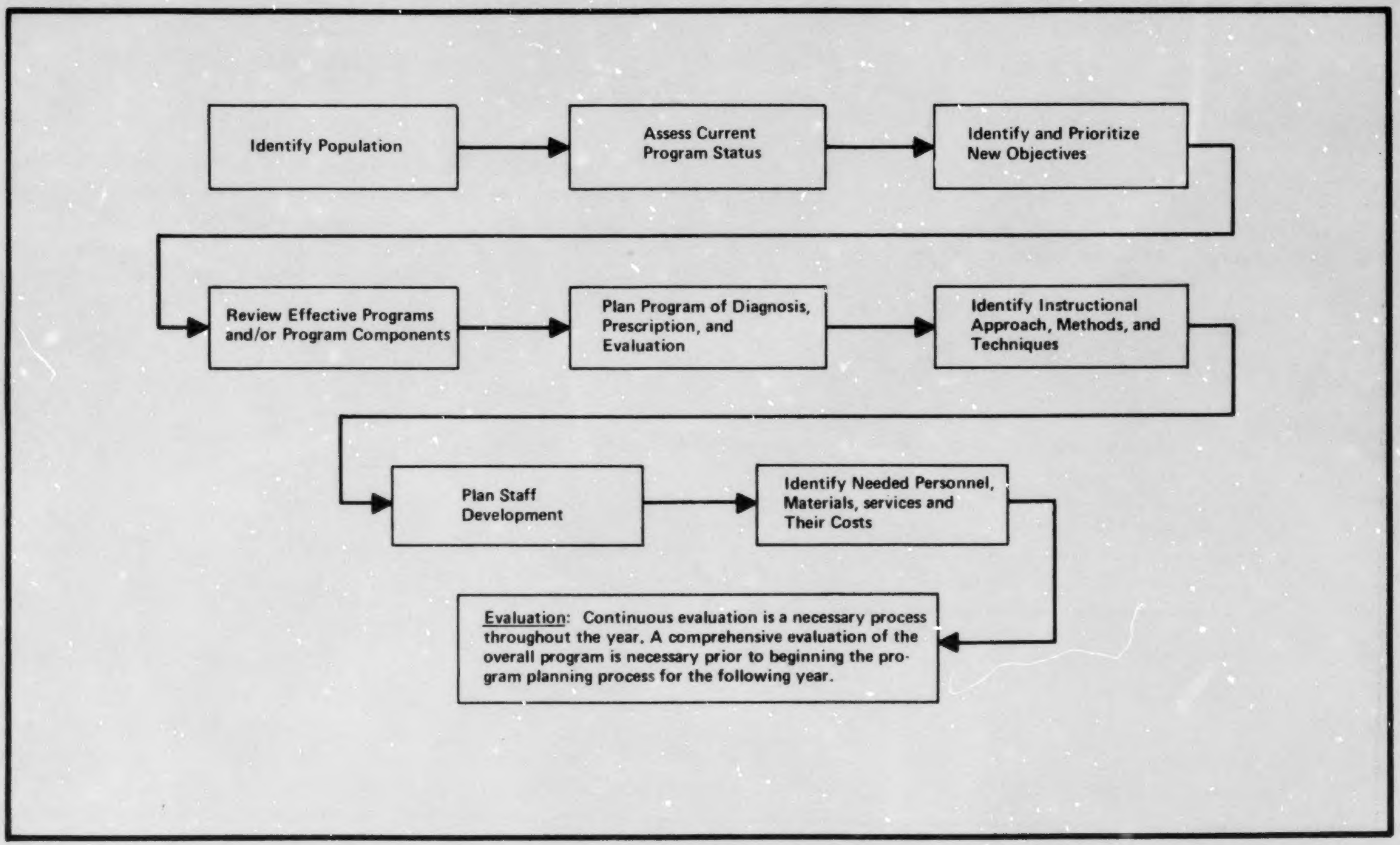
The end of the planning activity is signaled by completion of all entries on the charts. Pertinent information may, at this point, be compiled into a written statement which will be available to all participants in the program.

OTHER USES

While the Handbook and charts are designed to apply to program planning and revision in reading, they need not be limited to that segment of the curriculum alone. Other school personnel may find the process useful in discussing their curriculum needs.

Still another use of the material is in college courses in supervision and curriculum development as well as in reading instruction. Teachers in preparation can perceive their role as a teacher more clearly as they learn about the curriculum planning process. The materials can also be useful for inservice education with classroom teachers, aides and ancillary personnel in reviewing and modifying the existing reading program.

FLOW CHART FOR PROGRAM ASSESSMENT AND PLANNING


Identify Population
Assess Current Program Status
Identify and Prioritize New Objectives
Review Effective Programs and/or Program Components
Plan Program of Diagnosis, Prescription, and Evaluation
Identify Instructional Approach, Methods, and Techniques
Plan Staff Development
Identify Needed Personnel, Materials, services and Their Costs
Evaluation: Continuous evaluation is a necessary process throughout the year. A comprehensive evaluation of the overall program is necessary prior to beginning the program planning process for the following year.

Right to Read Assessment and Planning Handbook
Chart 1

BASIC DATA

(A) NAME OF SCHOOL ____________________

(B) GRADE OR LEVEL

(C) ENROLLMENT BY GRADE OR LEVEL

(B)														
(C)														

(D) TASK FORCE (name of members): PRINCIPAL ____________________

READING SPECIALIST ____________________ LIBRARIAN ____________________

DISTRICT OFFICE ADMINISTRATOR ____________________ TEACHERS ____________________

____

____________________ PARENTS ____________________

____

____________________ OTHERS ____________________

ADDITIONAL DATA

(E) COMMUNITY REPRESENTED: _____ INNER CITY _____ CITY _____ SUBURBAN _____ RURAL

(F) ETHNIC/RACIAL DISTRIBUTION:

_____ % NATIVE AMERICAN _____ % ASIAN _____ % BLACK _____ % MEXICAN AMERICAN _____ % PUERTO RICAN _____ % WHITE

_____ % OTHER

(G) ON A.F.D.C. _____ %, OR OTHER INDIXES OF SOCIO-ECONOMIC LEVEL _____

(H) MOBILITY (LAST THREE YEARS): _____ % STUDENTS _____ % TEACHERS

BASIC DATA

The purpose of Chart 1 is to describe the population served and to facilitate organization of the Task Force.

Suggested steps to follow:

1. Fill out blanks A through D.
2. Select a permanent chairperson and recorder for the Task Force. The recorder should be given the Meeting Report Form to be completed during this session. (see Appendix p 39).
3. Determine a regular schedule of meetings, if possible (1st Wednesday, 4 p.m. etc.) and set the next date, time and place.
4. Assign some member of the Task Force to get the "Additional Data" and record it before the next meeting.
5. All members will need to scan the entire handbook before the next meeting.
6. Discuss and decide to whom the minutes of your meeting will need to be sent. This list may be modified after you have worked through Chart 2D and "Determining Procedures for Curriculum Improvement." (see Appendix p. 57).
7. Adjourn meeting.

Right to Read Assessment and Planning Handbook
Chart 2A

READING PROGRAM ASSESSMENT

PROGRAM ELEMENTS	GRADE OR LEVEL														RANKED PRIORITY
I. Student Performance															
A. Standardized Tests	Record months or below norm:														
● Word Recognition															
● Vocabulary															
● Reading Comprehension															
● Spelling															
● Word Usage															
● Study Skills															
●															
●															
B. Other Measures	Answer yes or no and rate 1, 2, 3, 4, or 5														
Are Criterion Referenced tests given to students?															
Are Informal Reading Inventories given to students?															
Is an Attitude Toward Reading Survey given?															
Is a Reading Interest Inventory given?															
C. Evaluation Strategies	Answer yes or no and rate 1, 2, 3, 4, or 5														
● Diagnostic methods are used with most or all students to determine individual reading needs.															
● The teacher has formulated or selected specific objectives for each student and performance is measured in terms of these objectives.															
● Records of progress are kept for each individual student's performance.															
● Students are kept informed of their progress and are involved in self-evaluation (teacher-student conferences).															

READING PROGRAM ASSESSMENT

The purpose of chart number 2 is to review the components and record the current status of the present reading program of the school, and assign priorities for improvement.

Suggestions for sources of data and methods of collecting and recording are provided in the following pages, and in the appendix of this handbook. Data should be recorded as collected on the blank charts in the handbook and may be transferred to the larger charts for display. A "Data Collection Form" is included in the Appendix p. 56.

Central to assessment and planning a reading program is, of course, the individual student who is experiencing reading difficulties. The importance of his needs must determine the program's emphasis on a diagnostic-prescriptive approach to the teaching of reading. Unique individual problems such as bilingualism or bidalectalism will eventually require further study.

The Task Force must gain a broad view of:

1) Specific areas in which student performance seems most in need of improvement.
2) Patterns of reading difficulties within and between grades or levels.
3) Other factors which may affect reading progress in school, such as an overall climate of expecting success or lack of it.

The 2A chart is for the recording of data regarding how students read, and their interests in and their desires about reading. Specific areas of greatest need should emerge as the data is completed and will become high priority items in planning the new program.

Suggested steps to follow:

1. Record on Chart 11 starting date for Chart 2A.
2. Read Appendix pp. 43-46 on Standardized Tests.
3. Discuss and decide on a plan to collect needed data regarding standardized and other tests. You may choose to distribute the "Data Collection Form" (Appendix p. 56) to each teacher for completion or, in some instances, to the secretary who may have access to this information.
4. On Chart 11, record an estimated completion date for Chart 2A.
5. Record compiled data on the small chart 2A in the handbook and/or on the large wall Chart 2A.
6. Read the Appendix pp. 47-55 on Informal Measures.
7. Answer and record "yes" or "no" to the questions in Section B, Other Measures and use the rating scale as described in the Appendix material p. 58. yes / 2
8. Answer and record "yes" or "no" to the questions in Section C, Evaluation Strategies, and use the rating scale as in Step 7.
9. Read the Appendix p. 58 "Assigning Priorities for Objectives."
10. Discuss and reach consensus regarding the priorities, and record them in the "Ranked Priority" column.
11. Discuss the needs for staff development of the high priority items. List these needs of the "Staff Development Needs Summary" (see Appendix p. 67).
12. Evaluate work on this chart using "Monitoring the Program Planning Procedure (see Appendix p. 41) and record on Chart 11 the completion date.

Right to Read Assessment and Planning Handbook
Chart 2B

II. Program Organization

GRADE OR LEVEL

Answer yes or no and rate 1, 2, 3, 4, or 5

															RANKED PRIORITY
A. Is reading taught as a separate subject?															
B. Is reading taught indirectly through other subject-matter courses?															
C. Is special assistance provided for students in special need of reading help?															
D. Is single teacher-multi-subjects organization used in the reading program?															
E. Is a reading specialist available to teach students and/or consult with teachers?															
F. Is team teaching used in the reading program?															
G. Is student cross-age teaching used?															
H. Is a program in effect using a certificated teacher on a one-to-one or small group basis?															
I. Is an aide available to serve as paraprofessional staff member to assist the reading teacher?															
J. Other (Specify) ____________________															

K. Which of the following basic approaches and techniques are used for reading instruction?

● Meaning Emphasis														
● Code Emphasis														
● Linguistics														
● Modified Alphabet														
● Programmed Learning														
● Individualized Reading														
● Language Experience														
● Eclectic														
● ____________________														

Chart 2B - Directions

The purpose of Chart 2B is to help the Task Force view the organization of the reading program and determine what basic approaches are used for instruction. Upon completion of the K section, careful consideration should be given to assessing the continuity of the approach in the primary skills. Because different approaches may use a different learning sequence most students probably should complete a sequence of primary skills as developed by one approach or another to minimize the possibilities of omissions and confusions in their learning.

Suggested steps to follow:

1. Record on Chart 1 starting date for Chart 2B, and estimated completion date.
2. Discuss and answer "yes" or "no" to questions A through J. For definitions (see Appendix p. 78). Rate each item 1-5.
3. For section K, gather data required from each grade/level teacher and record.
4. Discuss, reach consensus, and assign priorities (1, 2, 3) to items A through J.
5. Discuss the needs for staff development of the high priority items. List these needs on the "Staff Development Summary", (see Appendix p. 67).
6. Evaluate and record on Chart 11 the completion date for Chart 2B.

GRADE OR LEVEL

Check those used:

L. What student grouping patterns are used?

- One-to-one
- Small groups (5 or less students)
- Large groups (6 or more students)
- Total Class
- Heterogeneous
- Homogeneous
- Is there need to study group patterns? Yes____ No____ Priority?

RANKED PRIORITY

M. What features of a planned and articulated reading program are evident?

Answer yes or no and rate 1, 2, 3, 4, or 5.

- Is a single planned, systematic program for teaching decoding skills used for most students in the school?
- ...comprehension skills used for most students in the school?
- ... study skills used for most students in the school?
- ...vocabulary skills used for most students in the school?
- Is there an alternative program provided for individualschildren who need it?
- Does the teacher use the text manual and supportive materials?
- Is a written record of skills mastered by each student (basal and recreational) passed to the next teacher?
- Is a written record of each student's reading level provided for content area teachers at junior and senior high?
- Is provision made in the school for careful reading placement of the entering student who comes with no records?
- Is initial reading instruction provided in the student's first language?
- When will money be allocated for major change of reading materials? (date) ________________

Chart 2C - Directions

The purpose of Chart 2C is to examine grouping patterns and determine the status of provision for articulation of the reading program K-12.

Suggested steps to follow:

1. Record on Chart 11 starting date for Chart 2C, and estimated completion date.
2. Collect data on grouping patterns from teachers.
3. Record compiled grouping data on the small Chart 2C in the handbook and/or on the large wall Chart 2C.
4. Discuss and answer questions "yes" or "no" under Section M.
5. Discuss each item and rate (1-5).
6. Discuss, reach consensus, and record the priority (1, 2, 3) given each item. (see Appendix p. 58).
7. Evaluate and record on Chart 11 the completion date for Chart 2C.

Note: If grouping patterns seem to need modification, go to Chart 5. Write "Grouping Patterns" and check (✓) in one of the blank spaces.

RESOURCES		YES	NO	PRIORITY
Skills Assessment of Classroom Teachers of Reading	Has the "Teacher Skills Assessment Form" been completed for each member of the certified staff? (see Appendix p.69)	☐	☐	
Skills Assessment of Paraprofessional Personnel	Has the "Paraprofessional Skills Assessment Form" been completed for classified instructional staff? (see Appendix p.70)	☐	☐	
School Library	Total number of books in the library collection ______			
	Does the school have at least 10 books per student?	☐	☐	☐
	Does the school meet the standards for school media of the American Association of School Libraries? (see Appendix p.59) "Media Programs: District and Schools"	☐	☐	☐
Textbooks	Are adequate and appropriate reading textbooks available for each level of student performance?	☐	☐	☐
Supplemental Instructional Materials	Are adequate and appropriate supplementary books and materials available for each level of student performance?	☐	☐	☐
Staff Reading Specialists	Number available per week ______			☐
	Hours available per week ______			☐
Outside Consultants	Hours available per week ______			☐
Volunteers	Hours available per week ______			☐
DECISION MAKING	Has the "Determining Procedures for Curriculum Improvement in Our School" form been completed?	☐	☐	

Chart 2D - Directions

The purpose of Chart 2D is to help the Task Force look at the resources, both material and human, available in the building to teach reading and to ascertain the district decision makers and the process regarding curriculum changes.

Ultimately, however, any differences that occur in instruction will be in the classroom and for this reason assessment of teacher and paraprofessional skills is most important, (see Appendix p. 69 and 70).

The number of books per student in the library, as well as the organization for their use, has significant ramifications in the reading program. Appropriate books, both basal and supplemental, in adequate number for every level of student is equally important. This does not mean a copy of the same book per student for each grade level. It may mean books representing a wider variety of difficulty for use with students of varying degrees of reading development with the same grade or level. "Appropriate" may mean an alternative approach for those who have not been able to succeed in the text used for most children in the district. "Appropriate" may also mean instructional material at the correct level of difficulty for each student and may also mean material that has not been used in earlier grades. That is to say, a sixth grader reading at the 3rd grade level (or 10th grade level) needs material, interesting to him which is written, at his instructional level and that he has not used or seen previously by his peers.

Suggested steps to follow:

1. Record on Chart 11 starting date for Chart 2D, and estimated completion date.
2. Discuss and plan an appropriate way for your building to complete the "Teacher Skills Assessment Form" and "Paraprofessional Skills Assessment Form.
3. Assign some Task Force members to determine the number of books in library and calculate the book per student ratio. Record on the chart.
4. Discuss, reach consensus, and record "yes" or "no" on the questions regarding textbooks and supplemental instructional materials.
5. Assign a Task Force member to determine and record the number of hours available to the school by reading specialists, outside consultants and volunteers.
6. Determine if there is a specific procedure in your district for improving curriculum.
7. If a procedure exists, complete the "Determining Procedures for Curriculum Improvement in Our School" (see Appendix p. 57).
8. Optional: If no procedure exists, complete any questions that you can on the above-mentioned form paying particular attention to IV.
9. Discuss, reach consensus and assign priorities to the appropriate items.
10. Evaluate and record completion of Chart 2D or Chart 11.

Right to Read Assessment and Planning Handbook
Chart 3

SUMMARY OF PRIORITIES (GOALS)

CATEGORY 1 Critical	CATEGORY 2 Important	CATEGORY 3 Desirable

Right to Read Assessment and Planning Handbook
Chart 3 - Directions

The purpose of Chart 3 is to provide a display of the selected goals arranged in three categories as determined by the Task Force.

Suggested steps to follow:

1. Review Charts 2A, 2B, 2C and 2D. Enter all items from these charts that are ranked "1" in the Category 1, Critical of Chart 3. Items ranked "2" should be entered in the Category 2, Important column, etc.

2. All items that have been entered in the Category 1, Critical column represent the first series of goals to be accomplished by the Task Force. Action will be taken on the other two categories later. (see Appendix p. 58).

Note: As additional charts are completed and more data gathered, other high priority needs may become evident. If so, add them to this chart.

Chart 4

STANDARDS OF EXCELLENCE

R = READY NR = NOT READY GRADE OR LEVEL																																																						
	R	NR	R	NR	R	NR	R	NR	R	NR	R	NR	R	NR	R	NR	R	NR	R	NR	R	NR	R	NR	R	NR	R	NR	R	NR	R	NR	R	NR	R	NR	R	NR	R	NR	R	NR	R	NR	R	NR	R	NR	R	NR	R	NR	R	NR
TOTAL																																																						

STANDARDS OF EXCELLENCE FOR READING PROGRAMS

The purpose of Chart 4 is to record self-assessment data compiled by the instructional staff of their own readiness to carry out program components in terms of standards for excellence in reading programming. Schools in Right to Read states will likely want to consider adopting (or adapting) the State Criteria and/or Standards of Excellence. This list of criteria may be obtained from the State Director of Right to Read. Appendix p.73 carries a set of standards for excellence that may be considered for use, with needed modifications to fit your school.

The charts will show the self-evaluation of the staff or level by filled-in blocks indicating "ready" (R) or "not ready" (NR). The summary chart for the school or system will enter the number of teachers responding R and NR for each item by grade or other appropriate division for the school or system using the form.

Suggested steps to follow are these:

1. Before the staff meeting at which this assessment is to be discussed, duplicate Chart 4 and the list (or lists) of standards to be considered (the State Right to Read Criteria and/or Standards of Excellence, the standards contained in Appendix p. 73, and/or any other appropriate criteria) for each staff member.

2. Read and discuss the items of the standards being used.

3. Distribute the duplicated charts, asking staff members to indicate those items they are ready to accept and/or implement by blocking in or checking (whichever you prefer) the appropriate blocks on the chart. (Example of question: Are you ready to accept and/or implement for this school or district the idea expressed in Item 1?). The marking of the chart may be done privately, in conference with the principal, or in a group setting. It may be signed or unsigned, in terms of the wishes of the teachers.

4. Compile the information and record on the chart according to level. You may wish to use different colored ink for R and NR to make differences stand out.

5. Record totals at the bottom of the chart.

6. Examine, discuss, and note the staff development needs on the "Staff Development Needs Summary" (see Appendix p.67).

7. (Optional) at this point, the entire staff may wish to develop a school philosophy statement regarding the teaching of reading.

8. Evaluate and record completion of Chart 4 on Chart 11.

Right to Read Assessment and Planning Handbook
Chart 5

GOALS AND OBJECTIVES

GOALS (CRITICAL PRIORITIES)	BEHAVIORAL OBJECTIVES (SOLUTION STRATEGIES)

The purpose of Chart 5 is to develop behavioral objectives in relation to goals established by the Task Force. Competency in writing behavioral objectives is needed for Chart 6 and if lacking, inservice or the study of appropriate materials is indicated. Although the completion of Chart 5 is a relatively difficult job, it holds potential for tremendous rewards.

The "Goal" statements should indicate the outcomes expected by the Task Force in light of any deficiencies shown on Charts 2A,B,C,D. They are generally expressed in general (non-measurable) terms. Example: To improve the word analysis skills of students in the primary grades. For each goal there may be several (number will vary) steps necessary.

These steps are the statements that should be expressed in behavioral terms. These behavioral objectives are critical to the development of the program because they establish an objective basis for measuring program effectiveness and for guiding program change, whenever that becomes necessary. Behaviors should also refer to performances that call upon the same instructional materials being used in the school's program. They must also reflect the unique needs of the district as well as the local resources.

After the behavioral statements are completed, they can be linked to particular instructional materials as the prescriptive phase of a Diagnostic - Prescriptive - Evaluative system. There may be need for the continuous development of new objectives as the program evolves and improves.

Suggested steps to follow:

1. Assess the abilities of the Task Force members to write objectives.
2. If help is needed, arrange for inservice. See Appendix p.71 for sample objectives.
3. Convert each critical category statement from Chart 3 to a goal statement and enter in one of the larger areas at the left of the chart.
4. Write, in behavioral terms, the steps needed to accomplish each of the goal statements.
5. Discuss and decide if there is a need for inservice work regarding writing and using objectives for the entire staff. If so, record on the "Staff Development Needs" (see Appendix p.67).
6. Evaluate the work on this chart and record the appropriate information on Chart 11.

Chart 6

REVIEW OF EFFECTIVE PROGRAMS

PROGRAM COMPONENTS EFFECTIVE PROGRAM LOCATIONS						Select and check ✓ program components to be reviewed.													
	Class Organization and Schedule ○	Diagnosis Prescription Methods ○	Instructional Approaches ○	Student Motivation ○	Parent Community Involvement ○	Personnel Requirements ○	Staff Development ○	First Language Instruction ○	Materials ○	Materials Keyed to Skills ○	Instructional Equipment ○	Management System ○	Recordkeeping ○	Facilities ○	Evaluation ○	Start-up Cost ○	Per Pupil Operating Cost ○	○	○

REVIEW OF EFFECTIVE PROGRAMS

The purpose of Chart 6 is to review programs and literature of exemplary practices of teaching reading in accordance with criteria selected by the Task Force to aid in the implementation of program objectives.

The U.S. Office of Education Right to Read Effort under a contract to American Institute for Research of Palo Alto, California has studied more than 2,500 programs and will have validated twelve effective reading programs for packaging. AIR will also publish a descriptive catalogue which describes promising practices and programs which appear to be successful but did not meet stringent data requirements necessary for packaging.

The completion of this chart may take considerable time because locating, studying, and arranging for visits (if necessary) to other programs is not a short term process but its importance should not be overlooked. To omit this step could result in many wasted hours. Why attempt to rely on your own resources to reach your goals when other districts may have faced and solved some of the same problems?

State Departments of Education, Intermediate School District offices, colleges, publishers, district reading coordinators, state libraries, as well as local staff and community people may have information regarding programs to research or visit. The professional journals often carry articles describing ways to meet district needs that could spark creative ideas among the Task Force members.

Suggested steps to follow for this chart:

1. Discuss the program components listed at the top of the chart.
2. Check (✓) those that are important to your district in light of any deficiencies that you may have found in using Charts 2A, B, C, D.
3. List and check (✓) other components that may be apparent after the study of the Standards of Excellence.
4. List in the blank space and check (✓) other components that are unique to your district needs.
5. List in the left column programs to study and/or visit.
6. Decide who will be responsible for arranging each visitation, conducting a study of those too far away to visit, and compiling the information gathered.
7. Develop a system which will aid each member of the Task Force to become fully aware of the contribution of every study to your overall plans for improving reading in your district (see Appendix p. 77).
8. Compare, select, and mark good examples of program components that may be included in your proposed program.
9. Evaluate and record completion of this chart on Chart 11.

Chart 7A

DIAGNOSIS/PRESCRIPTION/EVALUATION

LEARNER OBJECTIVES	DIAGNOSIS		PRESCRIPTION			EVALUATION		Estimated Evaluation Schedule	
	Test or other Evaluation Technique Available	Test/Technique Acquired or Developed By Whom	Instructional Approach(es)	Materials Available	Materials Needed, Acquired or Developed by Whom	Test/Technique Available	Test/Technique Acquired or Developed By Whom	Pre	Post

Chart 7A - Directions

The purpose of Chart 7A is to record plans for diagnosis, prescription, and evaluation of selected objectives in learning activities. Using the learner objectives (not curricular) from Chart 3 and the information obtained on Charts 2A, 2B, 2C, and 2D, the Task Force should be able to determine a method of measuring growth for each objective. It is important to realize that both teacher and commercially prepared instruments have value in the process. The instruments selected must measure the objective under consideration. For instance, to meet a skill goal such as "Improving word recognition in the primary grades", the Task Force might develop as one objective: "Given a list of sight words, the student will accurately and instantly pronounce each word as it is presented to him." This is the diagnostic phase of teaching and should reveal which words the student knows and which he must learn. The prescriptive phase comes next, in which certain activities should prepare the student to reach the objective. The activities may vary, but whatever is done should be specific for that objective. The evaluation stage comes when the student has completed the activities and is again asked to recognize the words at sight. If he can do so the objective has been reached, if not reteaching is indicated

Sources of information on diagnosis and prescription include among others, your reading director or consultant, local university personnel, the State Right to Read staff, and the International Reading Association.

Instruments that measure specific objectives come in many forms: standardized tests, criterion measurement, attitude surveys and interest inventories. Be sure that the diagnostic instrument measures the current state of knowledge of the objective, the instructional materials fit the students needs and if the initial instruction does not accomplish the objective, provision is made to redirect efforts using alternative materials. Suggested steps to follow:

1. List the learner objectives taken from Chart 5.
2. Determine the test or other evaluation technique to be used to measure current knowledge of the selected student population for the objective.
3. After discussion and study of possible instruments, list the person responsible for acquiring or developing the test/technique for use and record by what date it will be needed. (Pretest)
4. Determine what materials will be needed to teach the objective. List the materials needed, the person responsible for obtaining them, and by what date they should be available for use.
5. Determine the appropriate instructional approach(es) or techniques to be utilized (see Appendix p. 78).
6. Determine the technique for evaluating the instructional activity. (Post-test).
7. After discussion and study of possible evaluative materials, list the person who will be responsible for acquiring or developing the test/technique and record by what date it will be needed.
8. From the information in former steps, determine a pre- and post-test schedule. At this stage of your planning remember that revision of the time span may be altered in the future.
9. Discuss and decide if inservice will be needed in order for the staff to use the tests and other evaluative techniques indicated on this chart. If so, record on the "Staff Development Needs" form (see Appendix p. 67).
10. Evaluate your work on this chart and record completion date.

Right to Read Assessment and Planning Handbook
Chart 7B

PROGRAM SUPPORT DESIGN

CURRICULAR AND OTHER OBJECTIVES	CURRENT STATUS PROGRAM COMPONENT TO BE CHANGED	DESCRIPTION OF STATUS TO BE ACHIEVED	RESPONSIBLE PERSON(S)	DATE TO BE COMPLETED

Right to Read Assessment and Planning Handbook
Chart 7B - Directions

Section B is for those objectives that are not student or learner objectives. As an example, an objective to select and implement an instructional approach or to develop and print individual student record cards for decoding skills would go in this section.

Completion of this chart will provide a review of the status of program components selected for improvement. Right beside this a brief statement of the status to be achieved will provide means of ready comparison.

Who will carry out each objective? When do you expect the objective to be completed? These questions will lead the Task Force to make these critical decisions.

Suggested steps to follow:

1. List the curricular objectives. Example: Grades K-6 will begin to use a management system in decoding skills for all children by November 1, 197 .
2. Describe current status of the program component. Example: (1) nonexistent or (2) available, but not used.
3. Describe the status to be achieved. Example: management system in decoding skills operating at all levels.
4. Decide the action to be taken and record name of person who will take responsibility for organizing forces to achieve the objective.
5. If staff development will be necessary to achieve the objective, list on "Staff Development Needs Summary" form (see Appendix p. 67).
6. Discuss, decide, and record a realistic date for completion.
7. Proceed to the next objective, if any.
8. Evaluate and record completion of Chart 7B on Chart 11.

Chart 8

STAFF DEVELOPMENT

OBJECTIVES	PERSONNEL	No.	STRUCTURE	CONDUCTORS	PROCEDURE	HOURS	DATE	EVALUATOR(S)	EVALUATION METHOD	INCENTIVE(S)	COST
A	B		C		D	E		F	G	H	I

Chart 8 - Directions

The purpose of chart 8 is to assist the Unit Task Force in recognizing (rather than trying to recall) options for staff development before making decisions on the same and for recording their decisions. It attempts to relate all staff development activities back to the priority objectives of the program already identified by the Unit Task force in chart number 5. Secondarily, the chart may assist in developing a personnel development program which is based on individual and group needs, continuous and held at most convenient times, supportive and morale building, cost effective, focused on doing, practical and classroom related, done by local personnel wherever possible, meeting the ethnic/racial/cultural needs of all parties concerned.

Suggested steps to follow:

1. List all priority objectives in column A as you have them listed in chart 5. Obviously list only those which demand further personnel development.
2. Review information recorded on "Staff Development Needs" form (see Appendix p. 67). The remaining steps on the chart are to be completed based on the priority objectives and the information received from the "Staff Development Needs Summary".
3. Identify the personnel to receive training, e.g., administrators, reading specialists, librarian, aides, multi-subject matter teachers, other school personnel, and list them in column B of the chart, along with the number to receive training in the column "Personnel" on this chart.
4. In column C "Structure" describe the general format for the training program, e.g., clinic instruction, workshop, visits to other classes/schools, publisher supplied, consultant supplied, college class, T.V., professional library subscription, seminar, institute, tour, and other, as well as listing those who will be conducting.
5. Describe the procedure for the training program in column D, "Procedure", e.g., lecture, debate, sumulation, role-playing, hands on, one-to-one discussion, directed practice, question-answer session, modeling, video tape, case study, panel, reading/writing experience, symposium, observation and other.
6. In column E record the schedule, e.g., time after school, weekends, evening, during the school day, summer, and other. Record the dates scheduled in the column "Date".
7. In column F, "Evaluator(s)", indicate those who will be evaluating the training program, e.g., leader, participants, outside observer, parents, analyst, facilitator, statistician, and other.
8. The method for evaluation should be recorded in column G, e.g., written, oral, audio questionnaire, pre- and post test, group, individual, and others.
9. Record in the "Incentive(s)" column, column H, the incentives selected for the participants, e.g., over-time, college credit, public recognition, certification, stipends and other.
10. The costs for the training program are to be recorded in column I, "Cost", e.g., stipends, honorarium, materials, travel per diem, dues, and other.
11. Evaluate the completion of this chart and record on chart 11.

Right to Read Assessment and Planning Handbook
Chart 9A

INSTRUCTIONAL MATERIALS, EQUIPMENT AND SERVICES

ITEMS (Check ✓ only those necessary to proposed program)		A NUMBER NEEDED FOR PROGRAM	B NUMBER AVAILABLE IN SCHOOL	C NUMBER AVAILABLE FROM OTHER SOURCES	D NUMBER TO BE PURCHASED	E ESTIMATED COST IF PURCHASED
Basal texts	○					
Programmed texts	○					
Workbooks	○					
Worksheets	○					
Tests	○					
Multi Media kits	○					
Paperbacks (non-cataloged)	○					
Magazines, Newspapers	○					
Games/Simulations	○					
First Language Materials	○					
Library Materials	○					
Films, Filmstrips	○					
Instructional Equipment	○					
Parent/Community Expenses	○					
Field Trips	○					
Other	○					

INSTRUCTIONAL MATERIALS, EQUIPMENT AND SERVICES

The purpose of Chart 9 is to provide means of listing materials, equipment and services currently available and of determining costs of additional instructional materials and services needed to implement the stated objectives. An inventory of the building's materials must be available to complete this chart.

Suggested steps to follow:

1. Study the building inventory.
2. Check (✓) items necessary to proposed program.
3. Record each checked (✓) item for Columns A, B, and C if quantity known.
4. Decide who will be responsible to determine and record the number for Column C (number available from other sources.)
5. Decide who will be responsible to determine cost per individual item.
6. Decide who will be responsible for calculating and recording costs. (Column E)
7. Evaluate and record the completion of this chart and on Chart 11.

COST ANALYSIS FOR PROPOSED PROGRAM

	A		B	C	D	E	F		G	H	I	J	K	L
Objectives	Is staff number adequate ?		If no, additional certificated personnel needed	Estimated annual cost	If no, additional classified personnel needed	Estimated annual cost	Are additional work days necessary for inservice and/or curriculum work?		If yes, additional classified days needed	Estimated cost	If yes, additional certificated days needed	Estimated cost	Professional materials and supplies for inservice and planning	Estimate of total additional cost
	Yes	No					Yes	No						
TOTALS														

COST ANALYSIS FOR PROPOSED PROGRAM

The purpose of this chart is to focus consideration on additional personnel and materials which may be needed to carry out the objectives determined for this program. By completing this chart, you will be able to estimate the personnel and other costs for each objective selected. Attention is directed to two areas: 1) instructional personnel needed to implement action for achieving each objective and and 2) costs of additional staff time, materials, and supplies necessary for inservice and curriculum planning. Note: (Changes may involve reallocation of existing resources, no additional funds may be required).

Do you have a sufficient number of staff members to do the job? For each objective, you will need to answer this question for both certificated and non-certificated staff. Will you need additional work days for staff inservice and curriculum planning? How many days total? Your personnel office should be able to help you estimate these costs. Do you have the professional books you need and other materials for staff development? Will you need consultative services? If you will, make an estimate of what you will need and the cost.

Your totals will help you determine whether each objective is realistic at the present time as you consider its cost in relationship to resources available. The completed chart may be helpful to you in justifying requests for additional allocations for your reading program.

This chart shows what additional dollars will buy. Suggested steps to follow:

1. List your objectives from Chart 5.
2. Discuss, decide and answer "yes" or "no" regarding the adequacy of your entire staff to carry out the first objective (Column A).
3. If your answer is "yes", proceed to Column F. Discuss and decide if additional work days will be needed for inservice and/or curriculum planning. Answer "yes" or "no". If the answer is "no" record and go on to your next objective.
4. If the answer to Column A is "no", discuss, decide and record in Columns B and D the number of certificated and/or classified personnel needed. Estimate the cost and record in Column C and/or E.
5. Proceed to Column F. If the answer is "yes", decide and record in Columns G and I the estimate of additional days needed for inservice and/or curriculum planning. Estimate costs and record in Column H and/or J.
6. Refer to "Staff Development Needs Summary" (see Appendix p. 67)
7. Estimate cost of professional materials, supplies, consultative services, workshops, etc., and record in Column K.
8. Column L = C + E + H + J and K. Record estimate of total additional costs for this objective.
9. Proceed to your next objective, if any.
10. Total all columns at bottom of the chart. Add Columns C, E, H, J and K for total cost of proposed program.
11. Consider the cost in relationship to resources available. You may need to refer to "Determining Procedures for Curriculum Improvement in Our Schools", (see Appendix p. 57).
12. Record completion on Chart 11.

EVALUATION PLAN

EVALUATOR ______________________________

Population assessed	PROGRAM OBJECTIVES	INSTRUMENT AND/OR TECHNIQUE USED		SIZE OF POPULATION	EVALUATION RESULTS		PERFORMANCE CHANGE Give scores or describe change
		NAME	SUBTEST		PRETEST DATE ________	POST TEST DATE ________	

Right to Read Assessment and Planning Handbook
Chart 10 - Directions

The purpose of this chart is to provide a procedure for recording continuous evaluation of the planned program. This is to be a working chart containing data that will be updated from time to time.

Suggested steps for Chart 10:

1. Identify the evaluator in the upper right hand corner of the chart.
2. Copy the objectives from the program "Goals and Objectives" Chart.
3. Identify them by population assessed.
4. Enter the name of an existing instrument, technique or an instrument that is to be developed by local personnel, and enter under "Instrument Used" column. Identify the subform if appropriate.
5. Enter the size of the population assessed in that column. (There may be occasions where the given sample size would be smaller for a given objective if that objective was aimed at a sub-group within the project.)
6. Under "Evaluation Results" column, first insert the dates of the pre- and post-evaluation. As the data is accumulated, present it in summary form.
7. Under "Performance Change" the information for raw scores and normalized results may be recorded or the change identified may be described.
8. Evaluate and record the work on this chart on Chart 11.

Right to Read Assessment and Planning Handbook
Chart 11

MONITORING OUR PROGRESS

CHART	BEGINNING DATE	PROPOSED COMPLETION DATE	COMPLETION DATE	COMMENTS
1				
2 A				
B				
C				
D				
3				
4				
5				
6				
7 A				
B				
8				
9 A				
B				
10				
11				

Chairperson of Task Force

MONITORING OUR PROGRESS

The purpose of Chart 11 is to record planned and current progress in the completion of the Right to Read charts. A continuous evaluation process is necessary to make this system work. Chart 11 is used to record progress, but the actual evaluation procedure is carried out using "Monitoring The Planning Procedure" (see Appendix p.41). This procedure is followed as each chart is completed before proceeding.

Suggested steps for Chart 11:

1. At the first Task Force session record the "Beginning Date" and "Proposed Completion Date" for Chart 1.
2. After Chart 1 is finished, and before recording the "Completion Date", the entire chart should be evaluated using "Monitoring The Planning Procedure" (see Appendix p.41).
3. Proceed to next chart and repeat Steps 1 and 2 for 2A, 2B, 2C, 2D through 10.

PURPOSES OF THE RIGHT TO READ
CHARTS 1-11

1. The purpose of chart number 1 is to describe the population served and to facilitate the organization of the Task Force.

2. (Sections A, B, C, D)
   The purpose of chart number 2 is to review the components and record the current status of the reading program. Further, to assign priorities for improvement of the school's reading program.

3. The purpose of chart number 3 is to provide a display of the selected goals arranged in 3 categories as determined by the Task Force.

4. The purpose of chart number 4 is to record self-assessment by the instructional staff of readiness to carry out the program components.

5. The purpose of chart number 5 is to develop behavioral objectives in relation to goals established by the Task Force.

6. The purpose of chart number 6 is to review programs and literature of exemplary practices of teaching reading in accordance with criteria selected by the Task Force to aid in the development of program objectives.

7. (Sections A, B)
   The purpose of chart number 7 is to record plans for diagnosis, prescription, and evaluation of selected objectives in learning and curriculum, and to determine instructional approaches, methods, and techniques.

8. The purpose of chart 8 is to record plans for staff development needs to implement the stated objectives.

9. (Sections A, B)
   The purpose of chart number 9 is to provide means of listing materials, equipment and services currently available and of determining costs of additional instructional materials and services, and personnel needed to implement the stated objectives.

10. The purpose of chart 10 is to record the continuous evaluation of the program.

11. The purpose of chart number 11 is to record planned and current progress in the completion of the Right to Read charts.

Right to Read
Handbook Appendix
For Use With All Charts

RIGHT TO READ TASK FORCE
MEETING REPORT FORM

Date ______________________

Check ___ if present

Members' Names

Chairperson	______________	___	______________	___
Recorder	______________	___	______________	___
	______________	___	______________	___
	______________	___	______________	___
	______________	___	______________	___

Others: ____

The Task Force worked on Chart___. Discussion topics, activities and decisions were:

1.

2.

3.

If more space is needed, please use the back of this sheet.

At our next meeting (Date ______________ Time __________ Place ________________)
we will consider Chart___. Our assignments before the next meeting are:
____
____

Signed ______________________________
Recorder

Recorder Note: Please complete this form at the meeting and give to school secretary (or other person) to type and distribute to the following people:
____
____

MONITORING THE PLANNING PROCEDURE

As each chart is completed, the Task Force should examine the results, using the following procedure:

A. Review the product

1. Have all of the steps required for the completion of the chart been considered and provided for?

2. Are the results accurate?

3. Is there concensus that the Task Force is now ready to proceed to the next chart?

B. Recycle when needed

1. If the Task Force is not satisfied with the quality of the work performed the tasks should be repeated until a concensus of satisfaction is reached.

2. When concensus is reached, the chart is completed and the Task Force proceeds to the next step.

C. Provide appropriate progress reports

1. Accurate records of decisions and action should be maintained.

2. A variety of reports may be essential. The district administrator may need a constant flow of information, given directly by the chairman, while the district faculty may receive written periodic progress reports.

D. Secure authority to proceed

1. Even though initial authority should have been granted to the Task Force to improve the reading program, it may be essential to reaffirm this authority at some steps of the process.

2. Accurate documentation is regarded as essential to the granting of authority especially for those steps requiring additional funding.

3. If authority is withheld seek clarification for the withholding and plan appropriate alternatives to overcome the deficiencies.

4. Proceed to the next step (chart) when all of the above evaluating steps have been accomplished.

5. Record completion progress on chart Number 11.

APPENDIX

EVALUATION

An effective reading program must have a strong evaluation component which utilizes both formal and informal techniques of evaluation. To assist you in planning your evaluation component (as parts of charts 2, 7, and 10), this appendix on Evaluation includes three sections: (1) Standardized Tests, (2) The Anchor Test Study, (3) Informal Measures. The first section presents information about standardized tests and their use. Section 2 discusses a recent U.S.O.E. project — the Anchor Test Study — which permits some widely-used standardized tests to be interchanged in pre- and post-testing (at grades 4-6). Section 3 provides some suggestions for informal measures that are often used in evaluating the effectiveness of the reading program.

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STANDARDIZED TESTS

The suggested test areas on Chart 2A are: Word recognition, vocabulary, reading comprehension, spelling, and word usage. Add or delete according to your district's inclinations. Information from standardized tests should reveal some reading needs. The Task Force must consider the unique qualities of particular tests in these areas before making selections, i.e., the selected test must in fact evaluate accurately the area under consideration. Standardized tests in other subject areas could be included also. There is a general description and evaluation of 7 reading tests (Anchor Test Study) that schools are encouraged to use at the end of this article. These were selected for the Anchor Test Study because, at the present time, they are widely used. The Anchor Test Study provides a means for comparing scores on the seven tests. Without this comparison, a score of one month below the norm on one test for a particular child did not mean the same as it did for another child who is one month below the norm on a different test.

In collecting data on student performance, the following examples and explanations may prove helpful. The blank forms should be filled, ready for data transfer to Chart 2A, when appropriate information has been gathered. Information on reading comprehension, word recognition, and other achievement data may be gathered from currently existing student files. Where current data are not available on a given group of students, data gathered during the previous school year may be substituted. However, data should be no more than one year old.

DATA COLLECTION

Grade or Level Grade 4

Subject or Area	Evaluation Instrument Used	Date	Class Range	Class Average	Norm**	Distance of Class Average from Norm (In months)
Reading Vocabulary	California achievement Reading, 1970 Form A	Feb. 4,	2.1	3.9	4.5	-6

**The norm is unique to the test used. It should be stated for each evaluative instrument used.

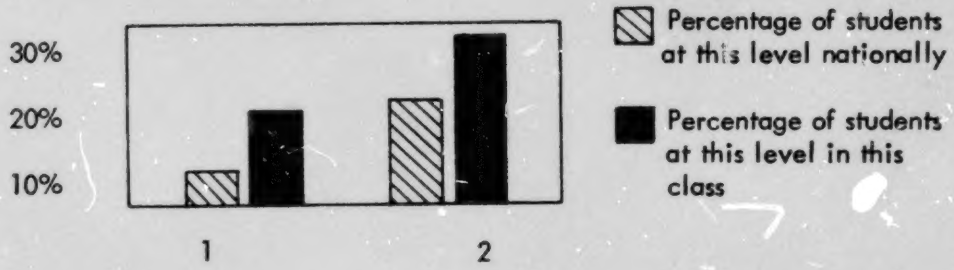
For each grade or level the distance of the class average from the test norm (in months) should be transferred to Chart 2, see Appendix p. 56 for "Data Collection" form.

Data may be displayed using other formats also. The following is used to focus on achievement patterns within a class. (These data are not transferrable to Chart 2.)

READING PATTERN DISPLAY

Grade or Level 3

Percentage of
Students at
Reading Levels



In the above example over 20% of the third grade students read at the first grade level, while nationally only 10% of third graders read at that level.

The list of skills under STUDENT PERFORMANCE on Chart 2 could be increased by the Task Force as stated previously. Perhaps a statement about reading will clarify reasons for selection of the list. Reading is generally considered to be a consecutive process in which the reader first recognizes words using three recognition devices - a "likeness-and-difference" approach in which he determines the printed letters while excluding those which look almost the same but are not, a context approach in which he uses his experience to narrow the possibilities of which word belongs under the topic about which he is reading and in the type of sentence he is reading, and a "matrix" skills which means that through much reading practice he has learned to note the combinations of vowels and consonants which are unique to the English language. Having recognized the word he then attaches a known meaning to it, or deduces one from the context of the sentence. This is an oversimplification, but will serve as justification for standard tests suggested:

(a) Word Recognition — It is necessary to determine if the student can use devices referred to above, and if not, which give trouble.

(b) Vocabulary — Which words are meaningless or have meanings so ambiguous as to be useless?

(c) Reading Comprehension — Can the student gain the information that the author intended to convey - facts, directions, etc.?

(d) Spelling — Is the student capable of analyzing words into their "sound" components? This is a further check on word-recognition techniques.

(e) Word Usage — Does the student understand syntax to the extent that he can gain knowledge of time, relationships, subordination, etc.? This is important in order to comprehend what is read.

THE ANCHOR TEST STUDY

The Anchor Test Study had two objectives: (1) to provide the ability to translate a child's score on any one of the seven most widely used standardized reading tests into a score on any of the other tests, and (2) to provide new nationally representative norms for each of the tests involved. An eighth test (The Gates-MacGinitie Reading Tests) was later added. The Office of Education published in late 1974 "Equivalence and Norms Tables for Selected Reading Achievement Tests" (Publication 74-305), to meet objective 1 of the Anchor Study.

The Anchor Test Study was conducted by the Educational Testing Service (Western Office, Berkeley, California) under contract from the U.S. Office of Education.

The choice of grades four, five, and six for the Study was made because reading is to crucial early in the child's educational career. Also, available data on testing show that school systems throughout the nation administer reading tests most frequently in the upper elementary grades.

The eight standardized tests selected for the Study are those most widely used by school systems throughout the nation. Data on test usage collected by the U.S. Office of Education show that these eight tests are used with more than 90 percent of the fourth, fifth, and sixth-grade children tested by school systems. The test editions, forms, and levels used are listed on the following page.

TESTS FOR LOWER PRIMARY GRADES

The Center for the Study of Evaluation (USLA Graduate School of Education) has evaluated elementary school tests available for all subjects and areas. The resulting publication was CSE Elementary School Test Evaluations.

TESTS INCLUDED IN ANCHOR TEST STUDY

TITLE/EDITION/FORM	PUBLISHER	SUBTESTS	LEVEL BEING USED FOR GRADE 4	5	6
California Achievement Tests (1970) — Reading, Forms A and B	CTB/ McGraw Hill	Reading Vocabulary Reading Comprehension	Level 3	Level 3	Level 4
Comprehensive Tests of Basic Skills (1968), Forms Q and R	CTB/ McGraw Hill	Reading Vocabulary Reading Comprehension	Level 2	Level 2	Level 3
Gates-MacGinitie Reading	Teachers College Columbia University	Reading Vocabulary Reading Comprehension	Survey D	Survey D	Survey D
Iowa Test of Basic Skills (1970), Forms 5 and 6	Houghton Mifflin	Vocabulary Reading Comprehension	Level 10	Level 11	Level 12
Metropolitan Reading Tests (1970), Forms F and G	Harcourt Brace Jovanovich	Word Analysis Reading	Elementary	Intermediate	Intermediate
Sequential Tests of Educational Progress STEP Series 11 (1969), Forms A and B	Educational Testing Service	Reading	Level 4	Level 4	Level 4
SRA Achievement, Series (1970), Forms E and F	Science Research Associates	Vocabulary Reading	Blue Edition	Blue Edition	Green Edition
Stanford Reading Tests (1964), Forms W and X	Harcourt Brace Jovanovich	Word Meaning Paragraph Meaning	Intermediate	Intermediate	Intermediate

AN INFORMAL READING INVENTORY

Purposes: (1) To permit the teacher to find the level on which a child should be instructed in reading, or (2) to tell the teacher whether a particular textbook "fits" the child — whether it is too hard or too easy.

Materials needed: Series of graded reading textbooks, questions prepared on a selection of at least 100 words from each book.

Selecting stories: Story located between pages 20 and 40 in each book and on at least 100 words.

Questions: Four questions at first grade level, eight at higher levels. Multiples of four make scoring easier. At least one-fourth of questions involve thought beyond what is stated in copy. ("The story didn't tell us, but what do you think made Nancy late for the party?" "From what you have read, try to describe what you think will happen next.")

Criteria for success:

COMPREHENSION — Understands at least three-fourths of main ideas (answers three-fourths of comprehension questions).

WORD RECOGNITION — Misses not more than one of each twenty words he reads - includes misses both in silent reading and in oral re-reading. Proper names and additional misses on same word are not counted.

Determining instructional level: Highest level at which child meets both criteria for success.

When to use: Use with those children about whose reading instructional level the teacher is in doubt. Not all pupils need it. May be used in beginning of year to help in grouping children for instruction if teacher does not have sufficient information about some children. May also be used in getting instructional level in remedial work.

How to give the informal reading inventory:

(1) Assemble books to be used.
(2) Select one in which child is likely to succeed.
(3) After quick attempt at motivation, ask child to read selection silently.
(4) As child reads silently, record in section A (WORDS ASKED DURING SILENT READING) any words on which he requests help. Mark in section E (SILENT READING CHECK LIST) any symptoms of poor reading.
(5) Ask the child questions on the selection. Record in section D (COMPREHENSION AFTER SILENT READING) "plus" for correct answers, "minus" for incorrect answers.
(6) Have child read same selection orally. Record in section B (WORDS MISSED IN ORAL READING) any words he misses. Check in section F (ORAL READING CHECK LIST) symptoms of poor reading.
(7) Determine whether child passed both requirements — comprehension and word recognition. If so, take next higher level book and repeat from item three. Keep going until he fails on one of the criteria. If he fails on first selection tried, drop to a lower level. Instructional level is highest level at which he meets both criteria. Sometimes, because of excessive symptoms of poor reading, the examiner may drop to a lower level for the recommended instructional level. Record instructional level in section G (INSTRUCTIONAL LEVEL).

Right to Read
Handbook Appendix
For Use With Chart 2A

EVALUATION

Name: ______________________ Date: __________

Series: ______________________ Trial Levels: 1___, 2___, 3___, 4___

A. WORDS ASKED DURING SILENT READING:

Trial 1	Trial 2	Trial 3	Trial 4

B. WORDS MISSED IN ORAL READING:

Trial 1	Trial 2	Trial 3	Trial 4

C. SUMMARY OF WORD RECOGNITION:

	Trial: 1	Trial: 2	Trial: 3	Trial: 4
Words in selection				
Silent Words asked				
Oral words missed				
TOTAL WORDS MISSED				
Satisfactory or Poor	S P	S P	S P	S P

D. COMPREHENSION AFTER SILENT READ:

Trial 1	Trial 2	Trial 3	Trial 4
1. ____	1. ____	1. ____	1. ____
2. ____	2. ____	2. ____	2. ____
3. ____	3. ____	3. ____	3. ____
4. ____	4. ____	4. ____	4. ____
5. ____	5. ____	5. ____	5. ____
6. ____	6. ____	6. ____	6. ____
7. ____	7. ____	7. ____	7. ____
8. ____	8. ____	8. ____	8. ____
S P	S P	S P	S P

E. SILENT READING CHECK LIST:

1	2	3	4	
				Moves lips, no sound
				Whispers
				Points at words
				Book held too close
				Book held too far away
				Appears tense
				Moves head
				Reads slowly

F. ORAL READING CHECK LIST:

1	2	3	4	
				Word-by-Word reader
				Inappropriate phrasing
				Ignores puncuation
				Many mispronunciation
				Faulty enunciation
				Monotonous voice
				High-pitched voice
				Tense or nervous
				Excessive repetitions
				Loses place
				Poor sight vocabulary
				Context guesses wrong
				Poor word attack skills
				Reads slowly
				Skips words
				Adds words
				Reads too fast
				Unknown words not tried

G. INSTRUCTIONAL LEVEL: __________

H. NOTES ON WORD ATTACK:

Examiner: ______________________

Right to Read
Handbook Appendix
For Use With Chart 2A

EVALUATION

ATTITUDE SCALE

To be used by the teacher to rate each student individually.

Name of Student ______________________ Date ____________

-2	-1	0	+1	+2
Student does not choose to read during free time.				Student frequently chooses to read during free time.

Another variety is illustrated below:

READING ATTITUDE
(Student completes by himself)

Student ______________________________ Date ______________

Arrange the following so that what you like to do most is listed first:
Hike, read, watch TV, write a story, etc. . . .

In which of the following work is reading needed very much, some, not at all:

	Very Much	Some	Not at all
1. Policeman			
2. Nurse			
3. Etc. . . .			

Interest Inventories

Interest Inventories — Many are informal, teacher constructed but commercial inventories are easily obtained if desired. Sometimes they are General Interest, as interests of students do correlate highly with their reading interests. Here, the discussion will be confined to Reading Interest Inventories. In general they are of three kinds: Lists of books from which a student is asked to indicate those which interested him, or in which he feels he would be interested; those which use ficticious book titles and ask students to indicate which they would like to read (thereby revealing topics and method of treatment which is most appealing); factors which make books interesting (usually selected by research from books which have proved their appeal to students, or compiled jointly in student and teacher discussions and conferences. Example:

READING INTERESTS

Student ______________________________ Date ______________

For each title listed, decide if you would want to read the book listed or not. Use these categories:

	WANT TO READ VERY MUCH	DON'T CARE	DO NOT WANT TO READ	
1.	____________	____________	____________	John and the Waterhole Mystery
2.	____________	____________	____________	Mary Finds a Sister
3.	____________	____________	____________	Mystery on the Nile

A SCALE TO MEASURE ATTITUDES TOWARD READING

by

Thomas H. Estes*

(Reprinted from the Journal of Reading
November 1971, pp. 135-138. Published by the
International Reading Association, Newark, Delaware.)

Aside from the question of whether pupils can read rests a question with an even more elusive answer: Will pupils read? Certainly, how students feel about reading is as important as whether they are able to read, for, as is true for most abilities, the value of reading ability lies in its use rather than its possession.

Fortunately, Books and the Teenage Reader, by G. Robert Carlsen (1967); Hooked on Books: Program and Proof, by Daniel Fader and Elton McNeil (1966); and Developing Attitudes Toward Learning, by Robert Mager (1969) have replaced the mystery of attitude change with specific suggestions.

A corollary problem has remained unsolved thus far, however. How does one measure change in attitude toward reading? At present, very little help is available to the teacher with this question. Concern over this state of affairs led to the preparation of the attitude scale which will be described herein. It is hoped that reading teachers will see the scale as useful in its present form, but will feel free to modify it to fit their needs. An aid in further development of the scale will soon be available (Estes, in preparation).

CONSTRUCTION OF THE SCALE

Of the several types of attitude scales which could have been designed, the "Likert" or "summate ratings" type was chosen because of its ease of use and generally high accuracy. Such a scale is composed of a list of statements to each of which the examinee is asked to respond on a five point scale varying from "I strongly agree" to "I strongly disagree." Each of the statements in this scale was worded in such a way as to call to mind the object "reading". A summation of values of each student's responses on the scale will yield a quantitative representation of his attitude toward reading. (Hence, the term "summated ratings scale.")

The first step in the construction of the scale was to secure a pool of statements from which could be selected approximately thirty for a tryout scale. A group of 27 high school and elementary teachers in the Charlottesville, Virginia, area were asked to contribute to the initial item pool. Each teacher was given a description of the kind of scale to be constructed and was asked to contribute "statements the response toward which will reflect attitude toward the activity of reading." Criteria for attitude scale item formulation and selection, as outlined by Edwards (1957), were provided for the teachers and were utilized in the selection of items for the try-out scale.

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*Associate director of the McGuffey Reading Center, University of Virginia: the author thanks Dr. Anna L. Heatherly, at the University of Arkansas, and Mrs. Paige Counts, Title III Director in Fluvana County, Virginia, for helping collect and analyze data used in the development of this scale.

The tryout scale consisted of twenty-eight items. These were administered to a sample of 283 pupils in grades 3-12. Specifically, two classrooms of pupils at each grade level, 3-12, were given the tryout scale. The classes were purposely chosen for their heterogeneous nature. It was desirable to include as wide a variety of attitudes toward reading as possible in order that the scale items have a chance to demonstrate the quality of separating pupils with positive attitudes from those with negative attitudes toward reading. (A crucial question to be asked in the analysis of the scale is that of whether each item tended to be answered positively by those pupils with positive attitude and negatively by those with negative attitudes.) Earlier research has suggested that one way to insure representation of a wide variety of attitudes is to sample a wide variety of ability levels (Estes, 1969).

ANALYSIS OF THE DATA

Following the tryout administration, the resulting data were analyzed in a two-stage procedure. First, an estimate of the scale's general performance was secured through computation of the mean, standard deviation, and reliability data. Second, an individual analysis of each item was made in terms of its ability to separate a group of people on the basis of attitude toward reading.

Each pupil could rank each of the twenty-eight items on a one to five scale, five being most positive and one most negative. Hence, the theoretically possible range of scores was 28 to 140. The actual range of scores obtained was 55 to 138. The mean of the 280 scores was 102.

One question which arose was whether the scale was performing differently for younger pupils, grades 3-6, as compared to more advanced pupils.

Source of Data	Range	X	s.d.	rel.
Grades 3-6	57-138	106*	16.4	.92
Grades 7-12	55-127	98*	17.1	.96
Total Group	55-138	102	17.1	.94

Table 1: Ranges, means, standard deviations, and reliabilities, for grades 3-6, grades 7-12, and the total group, with accompanying t-test.

The wide standard deviation on this administration of the scale suggests that a wide variety of attitudes toward reading was represented in the sample and that, considering the rather high discriminatory power of the items, the scale will be sensitive to a variety of attitude types in future administrations.

The reliability data for the scale was computed by the split-half method. The substantial reliability values obtained suggest that in its tryout form, the scale was performing with good consistency-repeated administrations would likely obtain similar results.

The second stage of data analysis was the item discrimination analysis. This was done by the procedure of analyzing each item for its discrimination of high scorers from low scorers on the scale. The items retained were those on which pupils with a positive attitude are likely to respond with a high scoring response and on which those pupils with a negative attitude are likely to respond with a low scoring response. In other words, the items retained were those on which a pupil's total score is likely to be high if he has a positive attitude but low if he has a negative attitude toward reading.

ADMINISTRATION AND SCORING

The following directions will be helpful to those who wish to use the scale in its present form.

1. Reproduce the scale and draw up a separate answer sheet that carries five multiple choice spaces (A-E) for each of twenty items.
2. Students should be assured that the manner in which they respond to the scale will not possibly affect their grade or standing in the course.
3. Notice that some items are positive statements and some are negative. Responses to these items will differ in value. (To "agree" to a positive statement is to reflect a positive attitude, whereas to "agree" to a negative statement is to reflect a negative attitude.) The following table should therefore be referred to in scoring.
4. With practice, the scorer can mark the negative items just prior to scoring and assign the proper value to each item at a glance.
5. The student's total score is a quantitative reflection of his attitude toward reading.
6. By administering the scale on a pre and post (October and May) basis, the teacher can note changes in attitude toward reading by subtracting the early score from the later one.

		Response Values				
Items		A	B	C	D	E
The negative items	Nos. 1, 3, 4, 6, 8, 9, 11, 12, 13, 16, 17, 20	1	2	3	4	5
The positive items	Nos. 2, 5, 7, 10, 14, 15, 18, 19	1	2	3	2	1

Table 2 Response values to assign to each possible response to each item.

SUMMARY

A scale to measure attitudes toward reading has been described from its inception to its present hopefully useful form. Directions for use of the scale have been delineated. The scale will allow teachers of reading to measure objectively how pupils in their schools and classes feel about reading, allowing a view of the pupil not presently permitted by testing programs.

ATTITUDE SCALE

A = strongly agree

B = agree

C = undecided

D = disagree

E = strongly disagree

1. Reading is for learning but not for enjoyment.
2. Money spent on books is well-spent.
3. There is nothing to be gained from reading books.
4. Books are a bore.
5. Reading is a good way to spend spare time.
6. Sharing books in class is a waste of time.
7. Reading turns me on.
8. Reading is only for grade grubbers.
9. Books aren't usually good enough to finish.
10. Reading is rewarding to me.
11. Reading becomes boring after about an hour.
12. Most books are too long and dull.
13. Free reading doesn't teach anything.

14. There should be more time for free reading during the school day.

15. There are many books which I hope to read.

16. Books should not be read except for class requirements.

17. Reading is something I can do without.

18. A certain amount of summer vacation should be set aside for reading.

19. Books make good presents.

20. Reading is dull.

REFERENCES

Carlsen, G. R., Books and the Teen-Age Reader, New York: Bantam Books, 1967.

Edward, D. I., Techniques of Attitude Scale Construction, New York: Appleton-Century-Crofts, 1957.

Estes, T., II, "The Measurement of Students' Attitudes Toward What They Study," In H. L. Herbert and P. L. Sanders (Eds.), Research in Reading in the Content Area: First Year Report, Syracuse, New York: Reading and Language Arts Center, Syracuse, University, 1969.

Fader, D. N. and McNeal, E. B., Hooked on Books: Program and Proof, New York: Berkeley, 1966.

Mager, R. F., Developing Attitudes Toward Learning, Palto Alto, California: Fearon Press, 1969.

DATA COLLECTION

Grade or level ______________________

Subject or Area	Evaluation Instrument Used	Date	Class Range	Class Average	Norm	Distance of Class Average (in months)

Transfer data from the last column to the 2A chart

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Right to Read Handbook Appendix
For Use With Chart 2D

DETERMINING PROCEDURES FOR CURRICULUM IMPROVEMENT IN OUR SCHOOL

I. Who has control over curriculum change in our school:

	Yes	No
Must the U.S. Office of Education approve changes in our reading program?	___	___
Must the State Education Agency approve?	___	___
Must the county or intermediate district approve?	___	___
Must our school board approve?	___	___
Must our superintendent approve?	___	___
Must an administrator of instruction approve?	___	___
Must a district instruction committee approve?	___	___
Must the teachers' bargaining unit approve?	___	___
Must the parent organization approve?	___	___
Must the principals' group approve?	___	___
Must a reading specialist approve?	___	___
Must the building principal approve?	___	___
Must each teacher approve?	___	___
Other ____ ?	___	___

II. Write out the step-by-step procedures used for changing curriculum in this school in this school district.

III. Are modifications needed in the school's curriculum improvement processes and procedures in order to bring about a more effective reading program? (Yes or No)

IV. If modifications are needed, what proposal will you make? To Whom?

ASSIGNING PRIORITIES FOR OBJECTIVES

When the Reading Program Assessment (Charts 2A, 2B, 2C, 2D) has been completed, the Task Force should examine the data as a basis for assigning a priority rating of 1, 2, or 3 in accordance with this scale:

Priority 1 — missing component or unacceptable condition that must be changed at the outset of the program.

Priority 2 — weak component, needs strengthening during the coming year.

Priority 3 — adequate component or non-critical situation to be corrected over period greater than one year.

Decisions on priorities and their recording should be made only after consensus has been reached by all members of the Task Force. These priorities will be entered in the appropriate column, and will be used as a basis for setting up objectives for the proposed reading program.

RATING SCALE INFORMATION

With the exception of the Standardized Test Results, ratings may be recorded in a number of sections of Chart 2. These evaluative ratings should reflect the combined judgements of the members of the Unit Task Force, using the following rating scale:

1 - completely satisfactory

2 - some improvements needed

3 - major improvements needed

4 - completely unsatisfactory

5 - inappropriate for grade/level

Right to Read
Handbook Appendix
For Use With Chart 2D

MEDIA PROGRAMS: DISTRICT AND SCHOOL

Media Programs: District and School authored jointly by the American Association of School Librarians a division of the American Library Association and the Association of Educational Communications and Technology an affiliate of the National Education Association should be used as reference in completing the assessment of your school media program.

Media Programs: District and School delineates guidelines and recommendations for media programs and resources essential for quality education. The publication focuses on qualitative goals, offering criteria for district and school media programs that make exemplary educational experiences available to children and youth. It describes programs designed to respond to both district and school objectives and reflects the vital interrelationships between those operations. All of the recommendations apply to public and parochial school systems and independent schools.

Recommendations for the district media program identify types of resources essential for various program elements, but specific quantities are avoided since they should be determined by the size and scope of the district program. At the school level, quantitative recommendations are based on a module of 250 students and multiples thereof. Recommendations for resources to support individual school media programs are made by clustering types of resources, with a range within these clusters. On this basis, suggested staffing patterns for school media programs show alternative combinations of staff members, including media specialists, other media professionals, technicians, and aides, based on the program emphases of individual schools. Similarly, recommendations for collections provide for ranges that reflect options available in related media formats and differing instructional emphases. Throughout, the purpose of the guidelines is to identify media programs that are responsive to the needs and potential of effective educational programs.

Programs of media services are designed to assist learners to grow in their ability to find, generate, evaluate, and apply information that helps them to function effectively as individuals and to participate fully in society. Through the use of media a student acquires and strenghthens skills in reading, observing, listening, and communicating ideas. The learner interacts with others, masters knowledges as well as skills, develops a spirit of inquiry, and achieves greater self motivation, discipline, and capacity for self evaluation. With a quality media program a school can challenge its members to participate in exciting and rewarding experiences that satisfy both individual and instructional purposes.[1]

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[1] Media Programs: District and School, prepared by the American Association of School Librarians and the Association of Educational Communications and Technology, Chicago: American Library Association, 1975.

The above publication may be ordered from the American Library Association, 50 East Huron Street, Chicago, Illinois, 60611. Estimated cost for this publication is $2.95.

Right to Read
Handbook Appendix
For Use With Chart 2D

STAFF

Recommended: Each school with an enrollment of 250 students requires a full-time media specialist. Additional professional staff members are required to respond to the needs of users in schools with larger enrollments and to provide a full range of media services. Each school with an enrollment of 250 needs a full-time media aide and, in most cases, a full-time media technician. A ratio of two full-time support staff members for every 250 students (or major fraction thereof) is recommended to fully implement a well developed media program. This is based on an analysis of the tasks to be performed and the time required to perform them.
Chapter IV, "Personnel," Media Programs: District and School.

	1974-75 Number	Projected Number
Professional: Media Specialist		
Supportive: Media aides and technicians		

EXPENDITURES

To maintain an up-to-date collection of media and equipment that fulfills the instructional program, the annual expenditure of a school district per student should be at least 10 percent of the national Per Pupil Operational Cost as computed by the United States Office of Education. According to the USOE definition, this figure includes the cost of administration, instruction, attendance services, health services, pupil transportation services, operation of plant, maintenance of plant, and fixed charges, computed on average daily attendance.

The standard of 10 percent of the Per Pupil Operational Cost for annual expenditures for collections provides for the acquisition of newly published/produced materials, needed materials other than those currently released, replacements, duplicates, media production supplies, costs for preprocessing of materials and items of equipment. For budget purposes, the line labeled collection includes all materials, equipment and operational supplies.

Chapter V. "Operation of the Media Program," Media

Programs: District and School

	Per Pupil Expenditure
Collection of Media and Equipment	

	YES	NO
Do your projected plans include increased support?	_____	_____
Can you estimate the proposed financial increase for the next school year?	_____	_____

FACILITIES

The collection gains power with good facilities where equipment gets more use, where production increases and where learners desire to return readily to the media center.

	YES	NO
1. Does the location of the media center provide for easy access and encourage frequent use?	____	____
2. Does the arrangement of the facilities support usage with a traffic flow that minimizes interruptions and distractions?	____	____
3. Are there adequate provisions for comfortable and efficient working arrangements for the staff?	____	____
4. Do the facilities create an environment which encourages the use of alternative media, sponsors inquiry and motivates every type of student to use the collection and draw upon media program services?	____	____
5. Are viewing, listening and reading areas properly shielded from production and conference areas?	____	____
6. Are the facilities available for use during and after school hours and during vacation periods?	____	____
7. Is provision made for equipment associated with production, evaluation and use of materials?	____	____
8. Has provision been made for adequate electrical outlets, light control, telephone and intercommunication devices, air conditioning, and sound control?	____	____
9. Are temperature and humidity controls provided which prevent deterioration of collections?	____	____

Chapter VII, "Facilities," Media Programs: District and School

SELECTION

The school's media collection represents the essential informational base of the instructional program. Media professionals should contribute expertise in evaluating and selecting materials and equipment in the process of building and maintaining adequate collections.

	YES	NO
10. Is the selection of the collection guided by a selection policy which is formulated by media staff, administrators, consultants, teachers, students, and representative citizens and adopted by the board of education?	____	____
11. Is the selection of materials a cooperative process which involves media staff, curriculum consultants, teachers, students and community representatives?	____	____
12. Is the selection of materials coordinated by the director of the district media program and head of the school media program respectively?	____	____
13. Are the materials and equipment evaluated prior to purchase by use of reliable evaluative selection tools and by firsthand examination?	____	____
14. Is the collection re-evaluated continuously?		

ORGANIZATION

	YES	NO
15. Does the organization and arrangement of the collection make it easily accessible to users?	____	____
16. Do print, visual, auditory and tactile formats of materials with associated equipment constitute the collection?	____	____
17. Does the collection include textbooks and related instructional materials and system?	____	____

Chapter VI, "Collections," Media Programs: District and School

SCHOOL COLLECTIONS

Recommended: A collection which is rich in breadth and depth of content and represents varied types of materials, points of view, and forms of expression should be in each school. It is recommended that a school with 500 or fewer students have a minimum collection of 20,000 items or 40 per student. An item is defined as a book, film, videotape, filmstrip, transparency, slide, periodical subscription, kit and any other form of material or associated equipment.*

Chapter VI, "Collections," Media Programs: District and School

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*It is possible that the collection in larger schools may provide the needed range in content, levels, forms of expression and formats at a ratio less than 40 items per student.

Right to Read
Handbook Appendix
For Use With Chart 2D

Base recommendations for a school with 500 or fewer users with items located within individual school.	Collection		
	197_-7_	197_-7_	197_-7_
Books 8,000 to 12,000 volumes or 16 to 24 per user			
Periodicals and Newspapers 50 to 175 titles			
Filmstrips, sound and silent 500 to 2,000 items or 1 to 4 per user			
Slides and Transparencies 2,000 to 6,000 items or 4 to 12 per user			
Graphics: Posters, Art and Study Prints, and Maps and Globes 800 to 1,200 items			
16mm and Super 8mm Sound Films, Video Tapes and Television Reception Access to a minimum of 3,000 titles, with sufficient duplicate prints to satisfy 90 percent of all requests			
Super 8mm Films, Silent 500 to 1,000 items, or 1 to 2 per user			
Audio Recordings: Tapes, Cassettes, Discs and Audio Cards 1,500 to 2,000 items or 3 to 4 per user			
Games and Toys 400 to 750 items			
Models and Sculpture 200 to 500 items			
Specimens 200 to 400 items			
Microforms: Microfilm, Microcard and Microfiche (Types and quantity vary with program needs)			
Microform Equipment: Readers and Printers 2 readers, 1 of which is portable, plus 1 reader-printer			

Base recommendations for a school with 500 or fewer users with items located within individual school. (Continued)	Collection		
	197_-7_	197_-7_	197_-7_
Filmstrip Equipment: Silent and Sound Projectors and Viewers 10 projectors and 30 viewers	______	______	______
Slide and Transparency Equipment Slide projectors: 6, or 1 for every 100 users	______	______	______
Slide viewers: 10 or 1 for every 50 users	______	______	______
Overhead projectors: 10, or 1 for every 50 users	______	______	______
16mm and Super 8mm Sound Projection and Video Playback and Reception Equipment 6 units, with 2 assigned to the media center, plus 1 additional unit for each 100 users	______	______	______
Super 8mm Equipment 20 cartridge-loaded projectors, plus 1 additional projector for every 75 users	______	______	______
Audio Equipment: Tape Recorders and Record Players 30 audio reproduction units	______	______	______
Educational Broadcast Radio 5 AM and FM receivers, plus a central distribution system	______	______	______
Opaque Projectors 1 per media center and 1 per 500 users	______	______	______
Microprojectors 1 per media center and 1 or more additional per school	______	______	______

	Collection		
Local Production Equipment (Types and amounts of local production equipment relfect the scope and amount of media production performed within the school).	197_-7_	197_-7_	197_-7_
Copying Machines	______	______	______
Duplication Machines	______	______	______
Dry Mount Press	______	______	______
Paper Cutters	______	______	______
Transparency Makers	______	______	______
Typewriters	______	______	______
Cameras	______	______	______
Video Tape Equipment	______	______	______

Right to Read
Handbook Appendix
For Use With Charts 2A, 2B, 2C,
2D, 4, 5, 7A, 7B, 8.

STAFF DEVELOPMENT NEEDS SUMMARY

What inservice is needed to overcome deficiencies indicated on the Charts?

Chart 2A——

What specific kind of staff development? ______________________________

For what personnel?
Principal ______________________________
Teachers, Grade/Level ______________________________
Paraprofessionals, Grade/Level ______________________________
Volunteers ______________________________

Chart 2B——

What specific kind of staff development? ______________________________

For what personnel?
Principal ______________________________
Teachers, Grade/Level ______________________________
Paraprofessionals, Grade/Level ______________________________
Volunteers ______________________________

If a change of basal reader is planned, what plans for staff development are needed and provided for? ______________________________

Who will provide staff development? ______________________________

Suggestions: District teachers knowledge in material, central office personnel, publishers consultants, teachers from out of district.

How much time do you think will be needed? ______________________________

Chart 2C——

What specific kind of staff development? ______________________________

Chart 2C (Continued)

For what personnel?
Principal ____
Teachers, Grade/Level ____
Paraprofessionals, Grade/Level ____
Volunteers ____

Chart 2D --

What specific kind of staff development? ____
____
____

For what personnel?
Principal ____
Teachers, Grade/Level ____
Paraprofessionals, Grade/Level ____
Volunteers ____

Chart 4 --

What specific items need staff development?
Item numbers ____

For what personnel?
Principal ____
Teachers, Grade/Level ____
Paraprofessionals, Grade/Level ____
Volunteers ____

Chart 5 --

If staff development is needed for the Task Force as well as other personnel in the writing and/or selection of behavioral objectives.

Chart 7- -

If staff development is needed in order for the staff to implement instructional approach(es) or in using the tests and other evaluative measures.

Right to Read
Handbook Appendix
For Use With Chart 2D

TEACHERS SKILLS ASSESSMENT FORM

Note: This form may best be used by principal (or supervisor) and teacher together in a conference situation.	Teacher is relatively confident and needs little or no further training	Teacher needs additional training	Comments
A. Motivating Students ● Creates and maintains children's interest in reading.			
● Sets an enthusiastic example for students by using her own reading skills and by frequent references to her reading interests.			
● Creates a classroom atmosphere in which students know they are expected to learn to read and each expects to learn.			
B. Organization for Reading ● Plans instructional time to provide adequate time for all aspects of the reading program.			
● Maintains materials and supplies in a convenient and orderly manner.			
● Organizes students into units or groups that work effectively.			
● Plans instructional activities within the framework of the sequences of reading skills selected for the school.			
● Plans for paraprofessional activities that relate to specific student objectives.			
C. Empathy for Students ● Shows concern and compassion for the individual students who are learing to read.			
D. Diagnosing Reading Problems ● Determines the individual student's needs for reading assistance in all areas.			
● Selects and uses appropriate evaluate instruments to determine individual problem areas.			
E. Prescribing for and Implementing Solutions to Reading Problems ● Knows and uses alternative approaches.			
● Knows of appropriate materials to meet specific instructional needs.			
● Can choose appropriate materials/approaches for a given reading problem.			
● Is able to teach the skills determined to be necessary for the individual student.			
● Uses evaluative instruments to test the accomplishment of individual objectives.			

Right to Read
Handbook Appendix
For Use With Chart 2D

PARAPROFESSIONAL SKILL ASSESSMENT

Note: This form may best be completed by the supervisor (or teacher) and the paraprofessional together in a conference situation.	Little or no training is needed	Additional training is needed	Comments
Shows concern and compassion for the individual students who are learning to read.			
Assists with maintenance of orderly care of instructional materials.			
Is supportive of students and encourages them to do their necessary assignment as well as they are able.			
Is able to understand and carry out the teacher's prescription with the students.			
Is accurate in checking and recording student's work.			
Knows basic operation of instructional equipment.			
Has a working knowledge of the basic sets of instructional materials or systems used. Understands author's intent and can use recommended techniques.			
Works at a high level of trust with the classroom teacher.			
Other:			

SOME GOALS AND OBJECTIVES FOR A READING PROGRAM

1. Student will comprehend written materials in terms of his purpose for reading.

A. Student will develop a variety of comprehension strategies.

(1) Identifies word meanings.
(2) Identifies and states main ideas and supporting details, directly stated and implied.
(3) Identifies relationships, directly stated and implied.
(4) Follows written directions accurately.
(5) Uses writing mechanics to interpret writer's intent.
(6) Identifies writing style and literary techniques.
(7) Evaluates written materials critically.

B. Student will develop a variety of word attack skills and will use those particular skills that most efficiently permit him to unlock unknown words.

(1) Uses context clues to unlock unknown words.
(2) Uses structural analysis clues to unlock unknown words.
(3) Uses phonics clues to unlock unknown words.
(4) Uses dictionary to unlock unknown words.

C. Student will demonstrate flexibility of rate in reading.

(1) Selects speed and techniques in terms of purpose for reading.
(2) Selects reading techniques in terms of difficulty of reading task.
(3) Reads as rapidly as purpose for reading and difficulty level of material will permit.

D. Student will use work-study skills in obtaining specific information in reading.

(1) Uses reference aids in books to locate specific sources of information.
(2) Uses library reference skills to locate specific sources of information.
(3) Uses encyclopedias, source books, and specialized reference works to obtain specific information.
(4) Takes notes on, outlines and summarizes materials that are read.
(5) Develops a plan of study.
(6) Locates and interprets specific information from maps, tables, graphs, and other pictorial materials.

E. Student will develop the special reading skills related to the various subject areas in which he reads.

(1) Develops the technical vocabulary of each subject area.
(2) Develops the concept background of each subject area that is needed for understanding what is read.
(3) Uses strategies that are most appropriate for reading material in a particular subject area.
(4) Uses any special reading techniques that are a part of a particular subject area.

E. Student will develop the special reading skills related to the various subject areas in which he reads (Continued)

(5) Interprets symbols and abbreviations correctly when they are a part of a subject area.

2. Student will read aloud in an agreeable manner.

A. Understands when it is appropriate to read aloud.

(1) Reads aloud to inform others.
(2) Reads aloud to enjoy the rhythm of poetry.
(3) Reads aloud to improve skills in oral reading.

B. Shows accurate pronunciation and enunciation.

(1) Pronounces words accurately in oral reading.
(2) Enunciates word endings in a natural speaking voice.

C. Uses voice and body to interpret what is being read.

(1) Uses rate, pitch, tone, and quality to interpret what writer intended.
(2) Phrases appropriately in oral reading.
(3) Maintains occasional eye contact with audience during oral reading.
(4) Sits or stands in comfortable position while reading orally.

3. Students will react with feeling to that which they read.

A. Students will develop permanent interests in reading.

(1) Develops a variety of interests that may be used to motivate reading.
(2) Seeks books and other reading materials that are related to his interests.
(3) Reads a variety of types of reading matter.

B. Students will develop literary tastes and appreciations.

(1) Identifies elements of style and form.
(2) Identifies story problem and solution.
(3) Identifies traits and motives of characters.
(4) Judges the relative merit of several pieces of literature.
(5) Selects for reading some materials that are considered to be of good quality.

STANDARDS OF EXCELLENCE FOR READING PROGRAMS*

1. A comprehensive needs assessment serves as a basis of program planning and change.

2. Planning for program change is systematic.

3. A local school site planning group (composed of classroom teachers, parents, school administrators, students—where feasible, and other appropriate persons) is active in planning and monitoring the programs.

4. A variety of interested persons (including teachers, principal, representative parents, school or system reading specialists, students, and community representatives) provide input into program goals.

5. Parents participate in the development and implementation of the reading program.

6. The school board participates in policy changes related to the reading program.

7. The program, in planning and making changes, involves leaders of the cultural and educational resources of the area being served, including institutions of higher education, nonprofit private schools, public and private nonprofit agencies such as libraries, museums, educational radio and television, and other cultural and educational resources of the community.

8. The community participates actively in implementation of the program.

9. The reading program and interest in reading is supported by the school faculty, school board members, administration, parents, and students.

10. The program is guided by a comprehensive set of goals that state specific instructional objectives, and these have been selected by the planning group.

11. The staff provides the several types of diagnostic assessments necessary for differentiated teaching, utilizing such devices and techniques as individual reading inventories, screening or survey tests, observation, and checklists.

12. The staff provides instruction necessary for a complete reading program in which attention is given to comprehension, word recognition, and work-study skills as well as to listening.

13. Goals for the program are concerned with both cognitive and affective areas.

14. The staff differentiates the levels and content of instruction in various phases of the program in accordance with diagnostic assessments which are being made continuously.

15. The staff utilizes different methods and techniques for teaching according to diagnostic findings.

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*Ideas for these criteria came mainly from two sources: Public Law 93-380 and "An Assessment Scale for Use in Examining a Reading Program," produced by USOE Right to Read.

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16. The staff shows concern for each learner as an individual person.

17. The educational setting within which the learner is expected to develop skills in reading is conducive to optimum growth in the realization of stated objectives.

18. The materials of instruction are varied and appropriate to the instructional objectives of the reading program as well as to the developmental needs of the learner.

19. The staff considers the effects of environmental stress on the learner.

20. The staff shows evidence of an understanding of human behavior and the culturally diverse experience background of students.

21. The program provides diagnostic testing aimed toward identifying children and adolescents with reading deficiencies.

22. The program provides reading instruction for children and adolescents whose reading achievement is below average for their age and/or grade.

23. The principal's knowledge and skill in leadership development for reading is constantly being increased.

24. The reading specialist's knowledge and skill in leadership development for reading is constantly being increased.

25. The reading program involves periodic and systematic evaluation of its effectiveness.

26. Information used in evaluation of learner progress or program effectiveness comes from not one but a variety of sources and from both informal and formal techniques.

27. Reading evaluation includes an assessment of the extent to which learners use the skills they possess.

28. Teacher status and change in competence in reading instruction and in attitudes toward reading instruction are assessed.

29. The program in reading is studied by an internal or external auditor or audit process.

30. The program provides for adequate record keeping and transmission to appropriate teachers as the student progresses from grade to grade.

31. Information about the need and purpose of the reading program is disseminated to the general community.

32. The reading program disseminates to the community information about group progress in reading.

33. The program provides for systematic reporting and interpreting of individual student progress to parents or guardians.

34. Progress and results of the reading program are reported in accordance with a systematic plan.

35. The program provides for teachers, aides, and other ancillary educational personnel appropriate staff development aimed toward improving their abilities in teaching reading.

36. The program, where children are limited in English speaking ability, uses bilingual educational methods and techniques.

37. Staff competencies are assessed to determine if they are adequate for carrying out the program effectively.

38. Staff development is provided to meet staff needs.

Right to Read
Handbook Appendix
For Use With Chart 6

WHAT AM I LOOKING FOR?

Location or Study: ____________________

Observer or Reporter ____________________ Date __________

Components and Criteria Selected from Charts 4 and 6	Component Observable		Application of Component?			Could we use this Application?		Would we need to Modify?	
✓	Yes	No	GOOD	FAIR	POOR	Yes	No	Yes	No
	Comments:								
✓	Yes	No	GOOD	FAIR	POOR	Yes	No	Yes	No
	Comments:								
✓	Yes	No	GOOD	FAIR	POOR	Yes	No	Yes	No
	Comments:								
✓	Yes	No	GOOD	FAIR	POOR	Yes	No	Yes	No
	Comments:								

INSTRUCTIONAL APPROACHES AND PERSONNEL

BASAL READERS

The materials in a basal series are carefully systematized, utilizing a series of books, workbooks, tests, and reading aids for each grade or reading level. These are carefully regulated methods. Vocabulary is controlled, and lesson plans and suggestions for supplemental activities are explained in the teacher's manual. Different basal series may stress different approaches to teaching reading. Some feature a "sight" or whole word approach to reading, others feature an intensive phonics program. Still others use the balanced or gradual phonics approach, while a fourth type emphasizes sound-symbol relationships in a linguistics approach.

CODE EMPHASIS

Code emphasis has two sub-categories: synthetic (phonics) and analytic (whole word). Phonics and the whole word approach differ only in the sequence in which letter sounds and blends are introduced. In the phonics approach the child learns the individual letter sounds first and then combines them into words. In the whole word approach, words are introduced first and the child develops a sight vocabulary before letter sounds and blends are introduced.

CROSS-AGE OR PEER TEACHING

This technique uses older students to instruct younger students (2nd and 6th graders are often matched). Older students tutor the younger students in reading, teach and supervise the playing of instructional games, and otherwise assist the teacher for about one period a day. Research indicates this technique benefits both the older and younger students. This arrangement requires careful planning and scheduling to be effective.

ELECTIC APPROACH

The electic approach combines different materials for teaching reading according to the teacher's perception of student needs. Whatever combination of materials is selected, the total approach is usually highly dependent on the use of basal readers. Workbooks and other supplementary materials accompany the basals. The electic method is the one most often recommended by teacher training institutions. Language needs and language experiences of the students. According to supporters, "children learn to read as they learned to talk, from a desire to find our or tell something." For example, after children have gone on a field trip, they discuss their experiences. Their comments are then written up in booklets or on large sheets of paper on the classroom walls. These statements then become the "texts" for class reading instruction.

INDIVIDUALIZED READING

Individualized instruction may be one of three possible classroom approaches to reading instruction: (1) Adapting instructions to individual needs within (or along with) group instruction. Regardless of materials used, the teacher constantly diagnoses and prescribes for individuals. (2) Individual reading of a variety of reading materials is the core of the method; each child selects a book that he wishes to read and gets help only when he needs it; each child moves at his own rate. The teacher works with each child at regular intervals to check progress and give assistance. (3) A structured teaching situation in which, although children work individually, they are given specific programmed materials to meet their needs. After mastering a skill, they are given additional practice or placed in a higher level material.

LANGUAGE EXPERIENCE

A reading instructional approach which calls for the teacher(s) to build classroom activities upon the real language needs and language experiences of the students. According to supporters, "children learn to read as they learned to talk, from a desire to find out or tell something." For example, after children have gone on a field trip, they discuss their experiences. Their comments are then written up in booklets or on large sheets of paper on the classroom walls. These statements then become the "texts" for class reading instruction.

LINGUISTIC APPROACH

Reading as a language-related process is studied in relation to language by means of structural linguistics. Accurate information about spelling-sound relationships and about the structure of words is considered incidental rather than fundamental to learning to read. The first task for reading instruction should be to give pupils a conscious knowledge of the language patterns they have mastered at the unconscious operational level. Children are taught to read with main emphasis on larger patterns than words. The heart of the approach is moving, as needed, from larger to smaller wholes.

MEANING EMPHASIS

Meaning emphasis is an approach to reading instruction [illegible]d most often in the basal reading series. The principles upon which this approach is based include: (1) the process of reading should be defined broadly to include as major goals, from the start, not only word recognition but also comprehension and interpretation, appreciation, and application of what is read to the study of personal and social problems; and (2) the child should start with meaningful reading of whole words, sentences, and stories as closely geared to his own experiences and interests as possible. Silent reading should be stressed from the beginning of instruction.

MODIFIED ALPHABET (e.g., i.t.a.)

The modified alphabet approach is based on a "new" alphabet to be used by children when learning to read. The alphabet contains all of the conventional letters but Q and X, and additional characters are devised to make up the forty-four different sounds in English. These new characters resemble the traditional alphabet visually and each character stands for only one speech sound. Once children have learned to read with this modified alphabet, they switch to the traditional alphabet for all reading. The modified alphabet is not a reading method, but an aid to teachers no matter what other emphasis (code, meaning, etc.) they used in teaching reading.

PROGRAMMED INSTRUCTION

Programmed instruction is based on individualized materials which are in soft cover form (that is, they can be books, workbooks, or mimeographed sheets). The material to be learned is presented in small steps. Some programmed materials use a linear technique, where material is arranged in a simple ordered sequence, with the student working from the first through the last item. Another method (called branching) allows the student to follow hiw own route through the material. At given points in the sequence, if he gets the correct answer he may skip a frame or, if he misses an item, he may be rerouted through a series of review frames.

READING SPECIALIST

For the purposes of Program Planning a "Reading Specialist" is a staff teacher with a specialized background in reading who is responsible for instruction only in reading or language arts. This teacher may handle several different groups of students, instructing each group for one period at a time. Class size may still be large, and teacher aides may not be available, but no additional subject matter responsibility is assigned to this specialized person. Non-staff reading specialists are considered outside consultants.

SINGLE TEACHER-MULTI SUBJECTS (self contained classroom)

The teacher of multiple subjects is responsible for a self-contained classroom and provides instruction in all or most of the subjects. The teacher, alternatively, may be responsible for reading, mathematics, and social studies, while other teachers handle art, physical education, etc. The single teacher may or may not have an extensive background in reading, but will be responsible for reading along with other subjects.

TEACHERS OF READING

Any staff teachers who teach reading, whether they be single teacher-multi subjects, staff reading specialists, or subject matter teachers.

TEAM TEACHING

This technique uses a number of adults for instruction instead of one teacher in a self-contained classroom. Also known as "Differentiated Staffing," team teaching may include:

Master Teacher — Mainly responsible for planning and leadership, does some teaching.

Teacher — Mainly responsible for teaching, participate in planning.
Aides — Assist teachers in classroom, prepare materials, participate in planning.

Volunteers — Assist school staff, participate in planning.

TUTOR AIDE

A tutor aide serves as a paraprofessional staff member in assisting the reading teacher. The tutor aide provides one-to-one tutoring and/or assists with evaluation of materials and other classroom duties. A tutor aide must have some inservice training in reading instructional techniques.

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CHARACTERISTICS OF IMPROVEMENT PROGRAMS THAT WORK

Source: I Basic Skills Issues and Choices Issues in Basic Skills Planning and Instruction by Reed, L. and Ward, S. (Ed). St. Louis, Missouri: CEMREL, Inc., 1982 (published under contract with the Basic Skills Improvement Program, U.S. Department of Education, Washington, D.C.).

Characteristics of Successful School Programs in Basic Skills

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Editors' Note: *Some schools, regardless of location and socioeconomic status, consistently have higher achieving students. Improved instruction and improved student outcomes are generally goals of basic skills programs. In this paper Jay Samuels reviews several studies which, over the last fifteen years, have shed light on nine factors consistently found in effective schools. These factors are all directly under the control of the school staff. From Samuels' observations, the best laid basic skills plan will have little positive impact (or may have a negative impact) if the factors discussed in his paper are ignored.*

The concept of literacy has expanded during the last several centuries. During George Washington's day, for example, people were considered literate if they could sign their names (Resnick and Resnick, 1977). Nearly two centuries later the United Nations decided that people should be able to read with understanding and write a simple paragraph about everyday life in order to be considered literate. In a sense, the recent basic skills improvement legislation has expanded the concept of literacy by including among the basic skills reading, mathematics, writing, and oral communication. The Federal Basic Skills Improvement Program and many other federal, state, and district programs have as a primary goal the improvement of instruction in the basic skills.

The purpose of this paper is to help school systems establish more effective basic skills programs. The paper will (1) describe the characteristics of exemplary reading programs; (2) describe the practices of various school systems which are ineffective or counterproductive; (3) present new information regarding the difficulties schools have experienced in maintaining and establishing quality programs; and (4) present a model of school practice that should prove useful in establishing quality programs across a variety of subjects.

Before summarizing current research findings, we must offer two qualifications. First, educators are in no greater agreement about how to increase educational achievement than physicians are about the prevention and cure for heart disease or economists are about the problems of our economy. Some educators may object to ideas presented in this paper because they do not correspond to their own views of how to improve achievement.

Second, we will apply results obtained in the reading area (where extensive research on characteristics of exemplary programs has been done) to areas where far less research is available. We recognize that subjects such as mathematics may require special equipment — the use of *manipulables*, for example — not used in reading, but, in general, we feel the principles derived are applicable to other subjects.

Components of Successful Reading Programs

A good reading program is considerably more than a reading method. It may include factors and variables ranging from subtle assumptions about the ability of children to master basic reading skills to the acceptance of the premise that the school is the primary agent responsible for helping children master basic academic skills. In addition to the shaping assumptions that underlie the programs themselves, other important factors include such items as personnel, training and supervision, application of the principles of learning, and the nature and importance of evaluation.

Underlying Assumptions. There are several important assumptions or beliefs held by the staff of exemplary reading programs which seem to be associated with student academic growth. The first assumption is the belief that the school can have a significant impact on the academic achievement of its students. Consequently, the school holds itself responsible to a large extent for both the success and failure of its students. The second assumption is that most children are capable of mastering the basic academic skills. Teachers and administrators who hold these assumptions do not try to absolve the school of responsibility for student failure with excuses like "poor motivation," "lack of readiness," or "inadequate home background conditions." Instead, when students fail to learn, the school staff assumes the major responsibility for identifying and correcting the situation.

Personnel — *Administrators*. More often than not, an exemplary reading program has a strong administrative leader. In fact, the Rand Corporation report on implementing and sustaining educational innovation across a variety of subject matters states that the importance of administrators to the creation and maintenance of innovative practice can hardly be overstated. Administrative support, in the form of encouragement and the creation of an organizational climate giving the project "legitimacy," is essential to the project's development, operation, and maintenance. The support which the administrator gives is not in "how to do it" but in providing time for planning and carrying out decisions, securing necessary financial support, working with school personnel on a regular basis, and running interference against any counterforces in the school or community (Berman and McLaughlin, 1978, pp. 30-31).

Teachers. The belief system of the teacher is important to the success of a program. Necessary elements in the teacher's belief system are feelings of commitment to and support for the project goals. These feelings grow out of the social and psychological forces which operate in a school district and motivate the teacher to provide the time and energy necessary to implement the project goals (see Samuels and Edwall, 1976). The teachers typically found in exemplary reading programs believe that student success or failure depends upon what happens in the classroom and that student failure is not acceptable.

Berman and McLaughlin report that teachers rise to challenges. Ambitious and demanding programs seem more likely to win the commitment of teachers than routine projects, because a demanding program appeals to a teacher's sense of professionalism. One major reason teachers are willing to take on the challenge of attempting to bring about change in themselves and their students is their belief that they will become better teachers and that the students will benefit (1978, p. 25).

Teacher aides. In order to reduce the student-to-teacher ratio, the exemplary programs often used teacher aides in direct instruction. The aides had received training, so that an observer in a classroom might find what appeared to be anywhere from two to four teachers present.

Reading specialists. A number of successful projects used specialists. The specialists were used in a variety of ways, from helping to train staff to providing materials to serving as on-the-job consultants. The specialists did not work directly as remedial education teachers but had an indirect effect on student learning by working with teachers and teacher aides.

Teacher Training and Supervision. There seems to be strong support for teacher training in investigations of exemplary reading programs. Berman and McLaughlin conclude that educators and government officials have been too optimistic about how much time is needed to produce change in an educational system.

Their study indicates that it takes two years to get a project off the ground, two years to implement it, and an additional two years to produce a stable effect on student achievement scores (1978, p. 35).

The teacher training occurs during the two-year start-up time and the two-year implementation time. Berman and McLaughlin state that the training experiences which were helpful were

1. Concrete, teacher-specific, and ongoing training.
2. Classroom assistance from project or district staff.
3. Observation of the project in other classrooms or districts.
4. Regular project meetings.
5. Teacher participation in project decisions.
6. Local materials development.
7. Principal participation in training. (1978, pp. 29-30)

In order to insure implementation of prescribed teacher practices, instruction was supervised in some of the successful inner-city projects.

Curriculum — *Orientation*. Although the primary focus in the successful programs was what might be thought of as *task orientation*, there was a *human relations orientation* as well. The human relations orientation is one in which students find the classroom to be a friendly and supportive place to work. In other words, when task orientation is combined with a positive classroom climate, the situation is conducive to academic growth.

Skills-centered curriculum. Most successful reading programs studied included instruction in phonics. In addition, these programs provided experience in reading meaningful and interesting material in context. Unfortunately, the research studies did not include sufficient observation of instruction to provide reliable indications on how subskills instruction and meaning-oriented instruction were combined.

Relation of objectives, instruction, and materials. The successful reading programs had clear and specific objectives. In the exemplary programs both the type of instruction and the materials used were appropriate and relevant to the specific program objectives.

Time. While it is essential to allocate sufficient time for learning to take place, it is equally important that the available time be used efficiently. In successful programs, teachers were able to devote more class time to task-related activities, and the major part of the school day was spent in structured activities that left little unoccupied time. In addition, instruction was kept at a low level of complexity. In several of the successful programs, extra amounts of time — time which was used efficiently — were allocated to reading.

Structure. Structure is an important vehicle in providing time for learning. In a sense, structure is part of good classroom management. Routines are established in order to facilitate the movement of students and materials. The classrooms in the successful programs studied were described as being orderly, with less time wasted on discipline problems, giving instruction on routine matters (such as passing out books), and transition from one activity to another. In addition, the successful programs actually assisted teachers in establishing good classroom management, so that time would not be wasted.

Assessment. In the exemplary programs student progress was monitored through frequent assessment — both formal and informal — of progress. The assessment data were used to make decisions about instruction.

It is now possible to examine the characteristics common to the reading programs studied. Table 1 conveniently summarizes the components of each of these successful approaches to reading instruction.

Characteristics of Unsuccessful Reading Programs

It is undoubtedly useful to know the characteristics associated with successful reading programs. However, if we wish to build programs which will increase reading achievement, it is probably equally important to recognize the characteristics associated with those programs which were unsuccessful. Several reports have described characteristics of programs which did not significantly improve achievement (Armor et al., 1976; Berman and McLaughlin, 1978). A summary of those characteristics is presented below.

Table 1
Extent to which Exemplary Reading Programs Shared Common Components

Components	Weber (1971)	Hawkridge, Tallmadge, and Larsen (1968)	Wargo, et al. (1972)	Harris and Serwer (1966)	NY State Office of Education (1974)	Direct Instruction (Becker, 1978)	Wilder (1977)
Strong administrative leadership	+	+	+		+	+	+
High expectations and the belief that the teacher can make the difference	+		+	+	+	+	
Teacher aides used in direct instruction	+	+	+			+	
Reading specialist	+		+			+	+
Teacher training	+	+	+		+	+	+
Teacher role — present, diagnose, remediate	+	+	+			+	
Specific reading objectives	+	+	+	+		+	+
Skills-centered curriculum	+		+	+		+	+
Instruction and materials relevant to goals	+	+	+			+	+
Structured environment	+		+		+	+	
Positive classroom climate	+		+		+		
Efficient use of time	+	+	+	+		+	+
High intensity of treatment	+	+	+	+		+	+
Frequent evaluation of student progress	+	+	+		+	+	
Supervision of teachers			+			+	

+, Component was identified in the report.

Improper Program Initiation and Implementation. Before a program can work, there must be a climate of enthusiasm, commitment, and support for it from school personnel. It is this climate of commitment and support which motivates the staff to implement and translate the project goals into effective classroom practices. The following approaches to program initiation fail to create the necessary climate for support and implementation (Berman and McLaughlin, 1978).

Opportunism. The motivation for the initiation of the project is opportunistic, a response to political pressure, or an attempt to get federal money. Opportunistic initiation is characterized by lack of support and commitment from both central office and project staff. Since there is lack of support at any level, the staff is unwilling to invest the resources, time, and energy necessary to implement the project.

Top-down motivation. Although the central-office staff is sincerely interested in the program, they fail to win the support of the project staff. Consequently, the project staff do not invest the time and energy necessary to implement the project.

Bottom-up motivation. The "grass-roots" enthusiasm of the instructional staff is not matched by the central office staff. Consequently, there may be inadequate project implementation because the central office fails to allocate a sufficient amount of resources and staff services.

Inadequate Incubation and Development Time. A reading program is broad in scope, incorporating elements which include personnel, methods, materials, finances, and students. Changes that affect this many elements require considerable periods of time for planning and implementation. As previously noted, current research suggests that significant innovation requires at least six years. Some unsuccessful projects moved forward too quickly in their planning and failed to create the necessary climate for district support and commitment.

Narrow, Piecemeal Approaches. There are so many important elements in a good reading program that simple, "quick fix," single-element approaches usually cannot produce a significant impact on achievement. To produce such a significant impact, a comprehensive approach is required.

Lack of Commitment, Feelings of Inadequacy. The less successful projects often had staff who either did not have a feeling of commitment to the project plan or else lacked a sense of efficacy regarding their ability to bring about the necessary changes.

Nonsupportive Principal. The support and leadership of the school principal are vital to a successful project. In the unsuccessful projects, the principal often failed to create an atmosphere which emphasized hard work and dedication and an environment which supported teacher efforts and protected the teachers from disruptive forces.

Inefficient Use of Time. Time is a critical variable in learning. It is obvious that if mastery is to occur, the amount of time allocated must be commensurate with the needs of the students. It is also important that the allocated time be used efficiently. In the unsuccessful classrooms, time was wasted because routines were not established and there were often interruptions brought about by discipline problems.

Problems in Maintaining and Disseminating Quality Programs

The purpose of this paper has been to describe the characteristics of successful and unsuccessful reading programs in the hope that this information will help schools establish more effective environments for basic skills programs. Knowing the characteristics of successful programs, however, is only a starting point for teachers and administrators.

Schools which currently have successful programs are faced with the task of maintaining their quality programs. Berman and McLaughlin reached some sobering conclusions regarding the maintenance and dissemination of quality programs. First, successful projects were not easily disseminated to new sites, and the performance levels in the new site often fell short of the performance levels in the original site. Second, even the original successful projects had difficulty sustaining their success over a number of years. Third, often when the original funding agency withdrew its financial support, the school district was unprepared to provide the level of support necessary to sustain the project (1978, pp. v-vii).

These sobering findings are neither surprising nor unique to the field of education. While we seem to know a considerable amount about the characteristics of successful programs, we still need to know a great deal more about which of these characteristics are essential to the continued success of a program, its longevity in the school or district, and its successful dissemination. Although the goals are difficult to achieve, they are well worth the effort.

Designing Effective Programs in Basic Skills

We are now at the point where we can combine the information regarding the characteristics of outstanding reading programs with selected principles of learning. The resulting model should help facilitate the design of effective basic skills programs.

As seen in Figure 1, there are three factors which interact with each other to influence learning. These factors are the student, the school, and the task. The student brings certain aptitudes, knowledge, and motivations to a task. If the task is one which is interesting to the student, and which utilizes the aptitudes and skills the student possesses, the task is made easier. The difficulty of the task is determined in part by the task variables — content (what to teach), sequence (when to teach), and method (how to teach). There is ample evidence that each of these variables can be modified to influence the course of learning.

The school factor includes such instructional variables as reinforcement, the establishment of objectives, the pacing of instruction, motivation, and feedback affecting instructional decisions. These variables are largely under the control of the school, especially of the teacher.

The model of the teaching process shown

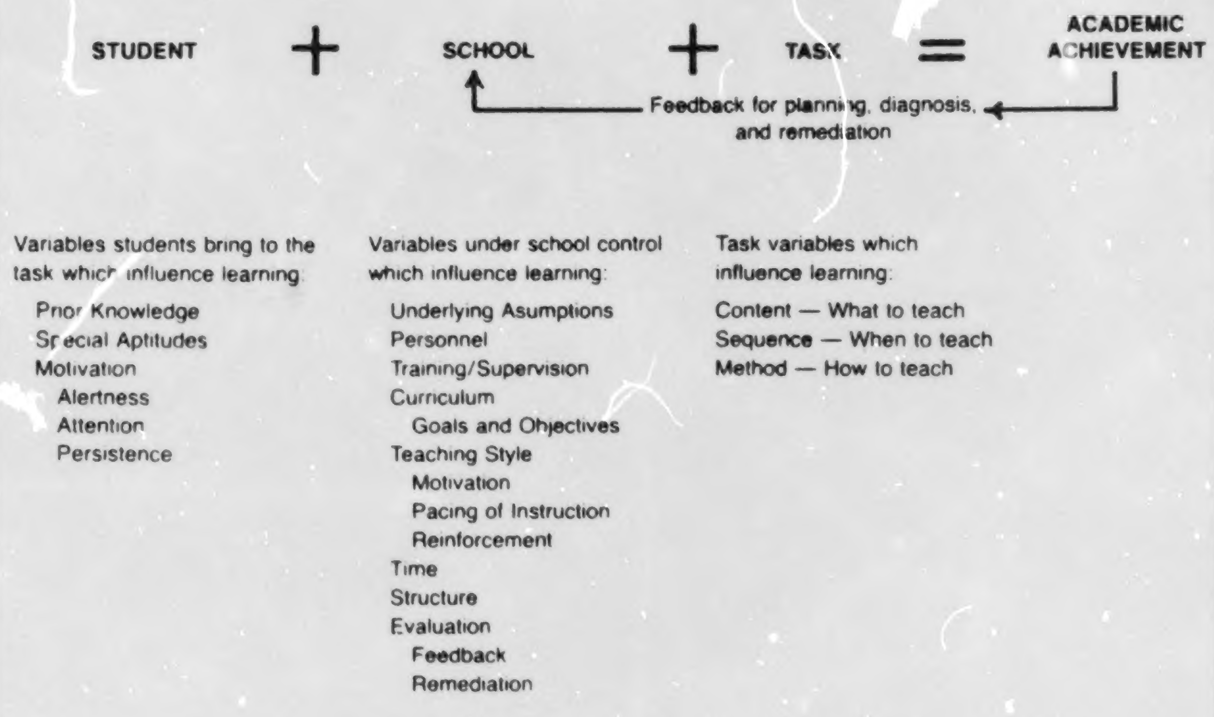
STUDENT
+
SCHOOL
+
TASK
=
ACADEMIC ACHIEVEMENT
Feedback for planning, diagnosis, and remediation
Variables students bring to the task which influence learning:
Prior Knowledge
Special Aptitudes
Motivation
Alertness
Attention
Persistence
Variables under school control which influence learning:
Underlying Asumptions
Personnel
Training/Supervision
Curriculum
Goals and Objectives
Teaching Style
Motivation
Pacing of Instruction
Reinforcement
Time
Structure
Evaluation
Feedback
Remediation
Task variables which influence learning:
Content — What to teach
Sequence — When to teach
Method — How to teach

Figure 1. Student, school, and task variables which influence academic achievement

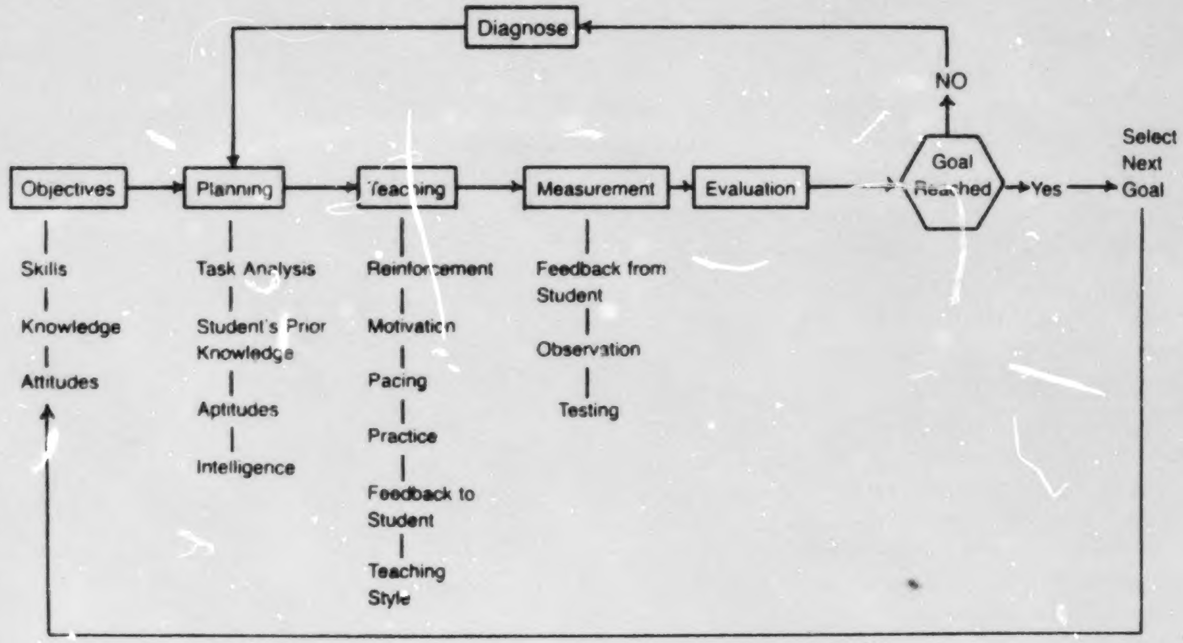
Diagnose
NO
Objectives
Planning
Teaching
Measurement
Evaluation
Goal Reached
Yes
Select Next Goal
Skills
Knowledge
Attitudes
Task Analysis
Student's Prior Knowledge
Aptitudes
Intelligence
Reinforcement
Motivation
Pacing
Practice
Feedback to Student
Teaching Style
Feedback from Student
Observation
Testing

Figure 2. How learner, school, and task variables are incorporated in a model of the teaching process.

in Figure 2 indicates some of the critical components. The importance of each of the components in the teaching model is underscored by the fact that effective teachers are aware of each of the factors and incorporate them in the teaching process, while ineffective teachers do not. For example, ineffective teachers may be unaware of the instructional objectives, or there may be a conflict between program objectives and the teacher's objectives. Ineffective teachers may also present information but fail to engage in frequent observation and evaluation of student learning. Either the failure to know instructional objectives or the failure to appropriately evaluate learner outcomes reduces the effectiveness of the instructional process.

Implications for Effective School Programs

Regardless of which of the basic skills is under consideration, the following factors should be considered.

Underlying Assumptions. The instructional staff — including administrators, specialists, teachers, and teacher aides — should believe that the critical agent for making the difference between satisfactory and unsatisfactory achievement is the school.

Incubation and Development. Bringing about change in a school system requires more time than most educators previously thought was necessary. Endeavors to improve instruction must be viewed as long-term commitments.

Personnel. A critical factor in the quality of school programs is the principal or other administrative agent who has the authority to establish the conditions necessary for improving program quality: (1) setting aside the time necessary for planning; (2) helping to get financial support; (3) working with school personnel on a regular basis; and (4) acting as a buffer against counterforces.

The teachers must have a feeling of commitment to the project goals and methods and must be assisted in direct instruction by trained teacher aides. Teachers must also have access to specialists who can serve as consultants and provide training and materials.

Teaching Style. Teaching style should be a combination of task orientation and human relations orientation. The teacher should endeavor to help students master the program objectives in an atmosphere which is friendly and supportive. This results in a classroom which is both work centered and human relations centered.

Teacher Supervision. Supervision of instruction can be used to ensure that teachers are fully implementing the program.

Curriculum. Regardless of which of the basic skills is under consideration, the program objectives should be stated in a manner that is both clear and specific.

Time. Time is a critical factor in all instruction. If the amount of time allocated for instruction is equal to the amount of time each student needs, then all students whose intellectual capacity is within the educable range should be capable of mastering the basic skills. Under these conditions, what varies is not mastery but the amount of time each student needs in order to achieve mastery.

While school personnel have often heard the phrase *individual differences*, our schools have done too little to accommodate the variability we encounter in our students. Slow learners and other children with special needs — handicapped children and children for whom English is a second language — must be given adequate time to learn the basic skills. Educators must also work harder to discover new ways to motivate children who have difficulty learning.

Structure. Since so many of the behaviors associated with teaching are of a repetitive nature, it is useful to establish routines. Such routines assure that time is used efficiently. Students and other staff can take over many of the classroom chores, leaving the teacher to handle tasks which cannot be made routine, such as planning, evaluating progress, diagnosing problems, motivating students, working with gifted students and slow learners, and providing the human factor so vital to classroom climate.

Assessment. A thorough, accurate recordkeeping system for keeping track of the progress of each student must be used. In order for evaluation to be useful, it must be designed to facilitate instructional decisions and must be an ongoing process.

Conclusion

As mentioned previously, there are no "quick fixes" or easy solutions to the problem of building an outstanding basic skills program. Complex problems demand complex solutions. Those who look for easy answers to our complex problems in education are searching for a magic bullet which does not exist. When one considers all the factors which must go into a good educational program, it is apparent why an extended amount of time is required to attain this goal. Although the task is difficult, as educators we must rise to the challenge and build more effective basic skills programs.

References

Armor, D.; Osegura, P.; Cox, M.; King, N.; McDonnel, L.; Pascal, A.; Pauly, E.; and Zellman, G. *Analysis of the School Preferred Reading Program in Selected Los Angeles Minority Schools*. Santa Monica, California: Rand Corporation, 1976.

Becker, W.C. "Teaching Reading and Language to the Disadvantaged — What Have We Learned from Field Research?" *Harvard Educational Review*, 47 (1977): 518-543.

Berman, P., and McLaughlin, M.W. *Federal Programs Supporting Educational Change, Vol. VIII: Implementing and Sustaining Innovations*. Santa Monica, California: Rand Corporation, 1978.

Harris, A., and Serwer, B. "The CRAFT Project: Instructional Time in Reading Research." *Reading Research Quarterly*, 1, 2 (1966): 27-57.

Hawkridge, D.G.; Tallmadge, G.K.; and Larsen, D.R. *A Study of Selected Exemplary Programs for the Education of Disadvantaged Children*. Final Report. Volume I. Palo Alto, California: American Institutes for Research, 1968. (ED 023 776)

New York State Office of Education. *School Factors Influencing Reading Achievement: A Performance Review*. Albany, New York: March 1974. (Ed 089 211)

Resnick, D.P., and Resnick, L.B. "The Nature of Literacy: An Historical Exploration." *Harvard Educational Review*, 47 (August 1977): 370-385.

Samuels, S.J., and Edwall, G. "An Overview of the Research Literature on Educational Innovation." In *A Study of the Locus and Nature of Reading Problems in Elementary Schools*, edited by J.T. Guthrie et al. Washington, D.C.: National Institute of Education, 1976

Wargo, M.J.; Tallmadge, G.K.; Michaels, D.D.; Lipe, D.; and Morris, S.J. *ESEA Title I: A Reanalysis and Synthesis of Evaluation Data from Fiscal Year 1965-1970*. *Palo Alto, California: American Institute for Research*, 1972.

Weber, George. "*Inner-City Can Be Taught to Read: 4 Successful Schools*." Washington, D.C.: Council for Basic Education, 1971.

Wilder, G. "Five Exemplary Reading Programs." In *Cognition, Curriculum, and Comprehension*, edited by J.T. Guthrie. Newark, Delaware: International Reading Association, 1977.

EFFECTIVE STRATEGIES FOR TEACHING BASIC SKILLS

by

Jane A. Stallings

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Effective Strategies for Teaching Basic Skills

Jane A. Stallings

Being an educator in the 1980s is certainly challenging and sometimes overwhelming. Seldom before in the history of education have schools been confronted with such a myriad of problems—dwindling student populations, decreasing budgets, decreasing test scores, increasing parent expectations, and collective bargaining. Since most principals in schools today were trained in the 1940s, 1950s, and 1960s, little of their formal education provided methods for solving these problems. While awaiting results from current research, principals and administrators must operate with advice from friends, their own common sense, and the unforgiving school of trial and error.

Initial studies of total school programs concluded that much of the money spent to provide better libraries, laboratories, school services, and staff training did little to improve the achievement level of students.[1] In fact, to the horror of the adult population, the test scores of college-bound students plummeted to all-time lows in the 1970s. In addition, other high school students were having difficulty in mastering basic skills. High schools in the 70s inherited extensive remediation problems from the elementary schools. These problems resulted in part from the general practice in the 60s of social promotion regardless of academic achievement. This practice did not help parents of students understand the realistic consequences of not being able to read, write, and compute. Ultimately, secondary schools have borne the greatest indictment for graduating incompetent students.

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[1] J. S. Coleman, E. Q. Campbell, C. J. Hobson, J. McPortland, A. M. Nood, E. D. Weinfeld, and R. L. York, *Equality of Educational Opportunity* (Washington, D.C.: Government Printing Office, 1966); R. Herrnstein, "IQ," *Atlantic Monthly* (September 1971): 43-64; C. Jencks, *Inequality: A Reassessment of the Effect of Family and Schooling in America* (New York: Basic Books, 1972); F. Mosteller and D. Moynihan, eds., *On Equality of Educational Opportunity* (New York: Vintage, 1972).

Parents from different sections of the country, outraged that their graduated children could not complete job applications or pass an Army test of reading, have sued school districts for not providing an adequate education.

Forty-seven states have responded by enacting laws that require students to pass minimum standards for secondary graduation. In many states this legislation also includes a provision for classes that will help secondary students gain basic skills. But teaching basic skills in secondary schools is at least a two-fold problem. First, little is known about how to turn failure into success in the secondary school. Very few studies have been conducted that could guide the instruction of secondary students who need remediation. Secondly, there are few secondary teachers prepared to teach basic skills. Because educators have assumed that basic skills are mastered in the elementary schools, secondary teacher preparation focuses on subject matter.

The purpose of this chapter is to discuss effective practices and strategies in teaching basic skills in secondary classrooms. Successful implementation of these practices is a first step toward changing patterns of student failure to patterns of success.

The education of secondary teachers has focused on subject content and curriculum. Courses or training on effective teaching strategies have been meager. In a study by Stallings and others, only 20 percent of the teachers assigned to teach basic reading skills had received training to teach reading.[2] Fortunately, in the 70s some research was funded to isolate effective strategies for helping low achieving secondary students succeed. From this work, several variables have emerged that principals and teachers should consider, including clarity in first-day organization and planning; the element of time and students on task; school policies related to effective instruction in basic skills; and staff development.

Clarity in First-Day Organization and Planning

Research by Carolyn Evertson focused on first-day organization of 102 junior high school English and mathematics classrooms.[3] Several characteristics differentiated more and less effective teacher-managers. In classrooms where there was less student misbehavior and more student achievement throughout the year:

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[2] J. Stallings, M. Needels, and N. Stayrook, *How to Change the Process of Teaching Basic Reading Skills in Secondary Schools*. Final Report to the National Institute of Education (Menlo Park, Calif.: SRI International, 1979).

[3] C. Evertson and E. Emmer, *Effective Management at the Beginning of the School Year in Junior High Classes* (The University of Texas at Austin: Research and Development Center for Teacher Education, 1980).

1. Teachers made rules, consequences, and procedures clear on the first day. These included monitoring the students and following through with consequences for those who did not comply.
2. Teachers established a system of student responsibility and accountability for work on the first day.
3. Teachers were skillful in providing information and instruction.
4. Teachers were skillful in organizing several instructional activities.

The Element of Time and Students on Task

A study by Stallings, Cory, Fairweather, and Needels illuminated a number of instructional strategies that are effective in teaching basic skills in secondary schools.[4] These include management of class time, interactive instruction, and focus of instruction.

Management of Time

In 14 schools, the length of the class period ranged from 40 to 55 minutes. Such time differences were not related to gain in reading achievement; student learning depended on how the available time was used. In classrooms where teachers were efficient in making assignments and allocating materials, there was more time available for instruction and students made greater gains in reading. One important factor in time management is to start on time and continue until the closing bell rings. The distribution of time across several activities during the class period is also an effective strategy for keeping students on task. Effective teachers, defined as those who helped students who read at the first to fourth-grade level gain up to two grade levels in one school year, distributed time in the following way:

Activity	Percentage of Time
Instruction—giving examples, explanations, linking to student experience	16
Review and discussion of class work and story content	12
Drill and practice to help memorize	4
Oral reading in small groups	21
Silent reading	5
Written assignments	4

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[4] J. Stallings, R. Cory, J. Fairweather, and M. Needels, *A Study of Basic Reading Skills Taught in Secondary Schools* (Menlo Park, Calif.: SRI International, January 1978).

The percentage of time allocated to each of these activities varied across classrooms according to student achievement levels. Interestingly, an ample amount of oral reading is helpful for low achieving students, but it is not as important for students achieving above the fourth-grade level. Oral reading activities occurred in lessons where vocabulary had been carefully developed and within small-group settings of students with similar reading skills where teachers helped students develop study concepts. Students who read below a fourth-grade level need to hear and say words as well as to read and write them. These students can usually pronounce or sound out words but often do not understand words in a story context. Secondary students' comprehension scores are often lower than their vocabulary scores. Oral reading activities allow the teacher to hear students' reading problems, ask clarifying questions, provide explanations to help students comprehend new words, and link the meaning to students' prior experience or knowledge.

Figure 1. Distribution of Time Across Activities in Four Ability Groups in Secondary Reading Classrooms

Activities*	Group mean percentage of time			
	Group I	Group II	Group III	Group IV
Interactive On-Task Activities:				
Reading aloud	21%	9%	1%	1%
Instruction	16	11	17	10
Discussion	12	5	3	1
Drill and Practice	4	4	4	2
Praise/support**	19	16	7	11
Corrective feedback**	20	16	4	12
Non-Interactive On-Task Activities:				
Classroom management	12%	15%	17%	27%
Reading silently	9	16	12	21
Written assignments	4	22	23	28
Off-Task Activities:				
Social interactions	5%	6%	3%	8%
Student uninvolved	6	4	4	9

Notes: Group I–Low pretest (students at 2nd to 4th grade level)
Gain: 4.8-5.4
Group II–Mod pretest (students at 4th to 6th grade level)
Gain: 5.5-7.4
Group III–High pretest (students above 6th grade level)
Gain: 7.8-9.5
Group IV–No gain
Gain 3.8-9.5

* These activities may occur simultaneously; therefore, the sum is greater than 100 percent.

** This variable is reported as frequency of observed occurrences per 45 minute period.

Students in classrooms where slight or no gain was made spent more time than other students on written assignments (28 percent) and silent reading (21 percent). They had less instruction, discussion/review, and drill/practice. Some of these students were assigned to spend entire periods using workbooks with very little instruction from the teacher. Such classrooms often registered more student misbehavior. Students with reading problems are likely to have shorter attention spans, and the opportunity to be involved in several activities during one class period seemed to help these students keep on task.

Interactive Supportive Instruction

While studying how teachers allocated time to various classroom activities, it became clear that teachers who were interactive in their teaching style had students who achieved more in reading. This interactive style included providing oral instruction for new work, discussing and reviewing students' work, providing drill and practice, asking questions, acknowledging correct responses, and supportively correcting wrong responses.

Interactive teachers tried to include all students in classroom discussions and review sessions. The most effective teachers did not choose volunteers but rather called on particular students. When volunteers are solicited, the same people take part each day, and many students may not participate at all. When calling on a student by name, it is important to ask a question at a level on which the student is most likely to be successful. If the student gives an incorrect response, it is important that the instructor rephrase the question or give a clue so the student can succeed and give a correct answer. However, a wrong answer can provide an opportunity for the teacher to clarify and reteach, if necessary. It is important in secondary remedial classrooms to handle incorrect responses in a supportive manner, since research indicates these students do not thrive on demeaning experiences and failure.

Interactive instruction is also important when teaching subjects other than remedial reading. Good found junior high school students learned more mathematics in classrooms where teachers used active instruction.[5]

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[5] T. L. Good, *The Missouri Mathematics Effectiveness Project* (University of Missouri at Columbia: School of Education, 1980).

These teachers made assignments and provided information in a clear manner. They asked students appropriate questions and provided immediate feedback to student responses. Unfortunately, many teachers of general mathematics students are not active in their teaching style. In a study of mathematics classes in 11 schools, Stallings and Robertson found that teachers more often used written workbook assignments and less often reviewed class work or directly instructed students in general mathematics classes than did teachers in geometry or calculus classes.[6] In classrooms where students are more involved, more achievement occurs. Students in general mathematics or pre-algebra classes were off-task significantly more often than were students in algebra II, geometry, or calculus classes.

Figure 2. Percentage of Student Time Spent in Activities for Three Types of Mathematics Classes*

Variables	Type I	Type II	Type III
Instruction	14.0%	25.0%	30.0%
Review	8.0	21.0	23.0
Written Assignments	34.0	15.0	11.0
Teacher Management (no students)	24.0	20.0	15.0
Social Interactions	11.0	13.0	13.0
Students Uninvolved	11.0	6.0	4.0
Discipline	4.0	0.20	0.05

Type I: General math or Pre-Algebra
Type II: Algebra I, Geometry
Type III: Algebra II, Trigonometry, Calculus
* Because some categories overlap, columns do not sum to 100%.

Eleven teachers in the study were observed in both lower and advanced mathematics classes. When observations of the teachers were compared, researchers found the same teacher would be active with advanced classes and *not* with lower mathematics classes. These low-achieving students need instruction from teachers to stay on task. Programmed workbooks do not help them learn the mathematical relationships necessary to cope with life. A teacher can see understanding in students' faces; when understanding is not apparent, a teacher can select another example from the students' backgrounds and explain it on the chalkboard.

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[6] J. Stallings and A. Robertson, *Factors Influencing Women's Decisions to Enroll in Elective Mathematics Classes in High School.* Final Report to the National Institute of Education (Menlo Park, Calif.: SRI International, 1979).

The most important research finding is that teachers need to *actively* teach. Note: relationships similar to those described in mathematics classes were also found in general science and physics classes. The advanced classes received active instruction and the less able students in general science classes received workbook assignments. This is not effective instruction for low achieving students.

Focus of Instruction

If teachers use an interactive instructional style, to whom should they focus their instruction—individuals, small groups, or the total group? During the last decade, considerable energy has been directed toward the development of individualized programs. Federal, state, and local funds have been spent to develop programmed reading, mathematics, and science books. All of these programmed materials were directed to giving children activities through which they could progress at their own rates. It was assumed that if students worked at their own pace through a series of seqential exercises, learning would occur. It did for some students, but it did not for others. In general, there has been a great disillusionment with individualized instruction. Some students learn best when new information is presented to a small group of students who are operating at a similiar pace.[7] Learning occurs when students read aloud, hear others read aloud, and hear others ask questions and respond. Hearing and speaking as well as reading and writing help students integrate and retain information. Individualized programs based almost totally on workbooks do not allow for this type of group learning.

At a conference on instructional dimensions sponsored by the National Institute of Education, 60 teachers discussed their experiences and attitudes toward individualized instruction. Teachers reported that in most individualized programs they felt their role was relegated to record keeping. When workbooks were relied on to provide student instruction, teachers felt unable to integrate the students' learning.[8] It appears that students need interactions with teachers. A teacher can develop concepts with a group and change examples or illustrations to coincide with the group's background experience. If students do not understand, the teacher can find yet another example. Books or machines don't do that. They provide opportunities to practice and reinforce instruction, but research suggests that by themselves, books or machines are not sufficient to provide the instruction students need. Supervisors and principals can support well-focused instruction, interactive teaching, and effective time management by making teachers aware of research findings and providing appropriate inservice training.

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[7] J. Stallings, "Implementation and Child Effects of Teaching Practices in Follow Through Classrooms," *Monographs of the Society for Research in Child Development* (December 1975): 50-93.

[8] M. Amarel and J. Stallings, "Individualized Instruction," in *Perspectives on the Instructional Dimension Study* (Washington, D.C.: National Institute of Education, 1978).

School Policies Related to Effective Basic Skills Instruction

Student outcomes are related to effective classroom practices, which may be dependent on school practices and policies. Rutter found that secondary student achievement, attendance, and delinquency were related to several school variables:

- Consistent expectations for students throughout school; for example, coming to class on time.
- An emphasis on pupil success and potential; for example, monthly awards for achievement, attendance, sports, drama, and music.
- Clear, direct, and timely communication and feedback to teachers and students.
- Teacher willingness to see students for personal assistance.
- Joint curriculum planning by staff.
- Good school repair and maintenance (students encouraged to respect surroundings and behave appropriately).[9]

While working with teachers to change specific behaviors, Stallings, Needels, and Stayrook found several school policy variables that were related to student achievement.[10] They included policies toward absences, cuts, and tardiness; instruction; assignment of teachers to classrooms; assignment of students to classrooms; grading systems; availability of student information; reading in the content area; and parental support. All of these variables can be manipulated to some degree by teachers and principals.

Absence Rate and Tardiness

Responses from a sample of San Francisco Bay Area secondary principals reveal that student absences contribute significantly to the problem of low achievement. In this sample, the absence rate (which included cuts) ranged from 5 to 25 percent. This rate is higher for low achieving students. Clearly, teachers cannot reach students who do not appear in class. However there is a relationship between student absences and teacher instructional style. In our study of teaching strategies in secondary remedial reading classrooms, we found that students were absent *less* often in classrooms where the following variables existed to a greater degree:

- Students perceived the classroom to be a friendly place.
- Students perceived some competitiveness and high expectations.
- Teachers provided ample verbal instruction.
- Teachers provided instruction to the total class.
- Students sometimes were leaders and provided information to the class—oral reports and the like.
- Students had opportunities to read aloud.

Students were absent significantly *more* often in classrooms where the following variables existed to a greater degree:

- Students spent the majority of class time doing written assignments in workbooks.
- Students spent the majority of class time reading silently.
- Teachers did management tasks—grading papers, making lesson plans, and keeping records—and were not involved with students during the majority of class time.
- Students were being disciplined for disruptive behavior.

Absence rates and tardiness need to be brought under control at the school level as well as at the classroom level. Following are some techniques used successfully by schools:

- Call at night (between 7 and 9 p.m.) to report absent or tardy students. In many families both parents work. Night calls require volunteers or payment for someone to call consistently. One school with a 25 percent absentee rate reduced it to 12 percent within a one-month period.
- The clergy in one school district volunteered two hours each morning. They greeted tardy students and called parents at home or at work to report tardy or absent students. This school reduced its absentee rate from 40 percent to 15 percent within the school year.
- Students who cut class or were tardy accumulated time to be used assisting the school custodian in cleaning the grounds and lavatories at lunch time, after school, or on Saturday mornings. This school's absence rate dropped from 15 percent to 9 percent.

To reduce absenteeism and tardiness, it is necessary to have a *state school policy* that details all of the penalties for noncompliance clearly to students, parents, and staff. *Consistency* of consequences for noncompliance is the key to reducing illegal cuts and tardiness. If some personnel follow school policy and others do not, students will concentrate on trying to find where the rules can be bent. Sometimes principals must reprimand a teacher or staff member for being too lax with students and unsupportive of school policy. Clarity and consistency seem to be the key to solving attendance problems.

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[9] M. Rutter, B. Maughan, P. Mortimer, and J. Ouston, *Fifteen Thousand Hours* (Cambridge, Mass.: Harvard University Press, 1979).

[10] Stallings, Needels, and Stayrook, 1979.

Intrusions

Research by Stallings, Needels, and Stayrook indicates that in classrooms with more intrusions from the outside (announcements on the intercom, requests for students to leave the room, tardy entrances by students) students make less gain in basic reading skills.[11] Other school personnel (counselors, school paper editors, drama coaches, physical education coaches, music directors, detention officers) may not appreciate how difficult it is to get a classroom of low ability students *on task* and productive, and how easy it is for them to get *off task*. When interruptions are allowed during class time, students may infer that what is occurring in the classroom lacks value.

School administrators can establish clear guidelines about the sacrosanct nature of classroom teaching; if we are serious about teaching basic skills, no one disturbs a teacher when class is in session. Nothing less than a cataclysmic event should stop a teaching session. Some administrators allow 10 minutes for announcements at the beginning of the day rather than making random announcements. One classroom in our study had 20 intrusions during a 45-minute period. Clearly, it is difficult to accomplish academic tasks in such an environment.

Assignment of Classrooms to Teachers

Research also indicates that remedial reading students gain more when teachers have permanent classrooms. Basic skills teachers need to arrange a reading environment where student growth charts can be displayed so that students can keep track of their progress. Teachers need diagnostic and prescriptive materials, and many high interest books at the right reading level at their fingertips. Teachers who must shift from one classroom to another cannot create an environment conducive to developing basic reading skills.

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[11] Stallings, Needels, and Stayrook, 1979.

Classrooms should be large so that students can be arranged in groups whenever small-group instruction is needed. As indicated earlier, small-group instruction is beneficial to secondary students who read at or below the fourth-grade level.

Assignment of Students to Classrooms

Students who require remediation make more progress in homogeneously grouped classrooms. Gains made by low achieving students have been related to class size and achievement level. Students below a fourth-grade level gained more when the class size averaged 18 students. Students between fourth and sixth-grade achievement level made gains in classes averaging 21 students, and students above the sixth-grade achievement level made gains in classes averaging 26 students. Teachers more often used written workbook assignments and less often reviewed class work or directly instructed in classes with general mathematics students than in geometry or calculus classes. These data suggest that students who achieve at a lower level should be placed in smaller classes than students who achieve at a higher level.

A classroom of 40 students with one or more teacher aides is not a good situation for the remedial student. These students tend to be easily distracted and the more bodies there are, the more distractions there are to filter.

These data do not advocate tracking or laning, but they do suggest that smaller classes and some homogenous grouping are effective for basic skills classes.

Grading Systems

Remedial classes need a variable grading system. Students who have a history of failure thrive best when they can experience daily success in programs that provide daily gains and 80 percent to 100 percent achievement scores on exercises. Remedial students will be overwhelmed with a sense of failure if they still receive a D or F on their report cards because their achievement is below grade level. Some teachers try to console their students by saying that a 90 percent F is not as bad as a 30 percent F. However, any F means failure to students and parents and may discourage students from further effort. In view of this, several possible alternative procedures are proposed:

- Identify the class as a basic skills course for improvement in reading, and assign grades on the basis of a student's progress in the course.

For example, a tenth-grade student who tested at a second-grade reading level when the course began and progressed to a fifth-grade reading level made excellent progress. This student should receive an A for improvement even though his or her reading achievement is still below grade level.

- Variable credit could be earned on productivity. In a five-credit course, students who complete half of the work in one semester might receive two and a half credits of C work rather than failing and receiving no credit. Some students learn more slowly than others, but they can and do learn if given adequate time. "Faster is not necessarily better." [12]
- In schools where the previous two suggestions are not acceptable, E, S, or N might be used to indicate that excellent, satisfactory, or no progress has been made.

Changing from one grading system to another is a difficult task that requires parental support as well as school staff support. Schools should allow a year to plan and consult with other schools using variable grading systems.

Student Information

Although teachers need information about students' reading problems and reading levels at the time classes are assigned, most teachers surveyed did not have student information readily available. Teachers feel their ability to select materials to match student needs would increase if at least the reading levels of students were printed on the class lists.

To obtain reading scores, teachers must go through counselors' files and record the data available for each of the 100 to 150 students in their classes. This requires 5 to 10 minutes per student. After searching the records, they may find that test information is not available for many students. Testing programs are particularly lax in many secondary schools; test data are often several years old and transfer student records may not be available until the middle or end of the semester.

In the past, there was a reluctance to make test scores easily available to teachers for fear that this information might prejudice teachers' attitudes toward students. However accurate this reluctance might be for other subject areas, it should not apply to basic reading skills teachers, who need all of the information that is available. While reading level is not by itself sufficient information, it will help teachers understand the range of student abilities. Basic skills teachers need more student information since secondary students who have a history of failure in reading are likely to have some perceptual, physical, or emotional problems in addition to reading problems of encoding, decoding, and comprehension. Group tests such as those developed by the Cincinnati School District gather these types of student information.

In addition to providing student information to secondary teachers of reading, a strong case can be made for providing inservice workshops on how to diagnose reading problems and prescribe corrective treatment. Workshops on the use of diagnostic and prescriptive materials should be conducted in the summer so that teachers can diagnose student problems during the first week of school. In some school districts, students start school several days after teachers report in the fall. Students who need remediation are scheduled for diagnostic testing during teacher preparation days, and teachers select appropriate programs for students before school begins.

Reading in the Content Area

Teachers who must try to teach reading in the content area need textbooks that provide similar information at different reading levels. Most often such materials are not available. In that case several options are available:

- Teachers may attempt to write their own materials for students with low reading ability. Several teachers could share this responsibility.
- Teachers may try to locate or develop audio tapes of textbooks (states produce some of these for use with the blind).
- Teachers may develop detailed teaching frameworks so that students can comprehend key concepts.

In any case, the administrative staff should convene interdepartmental meetings to discuss and clarify the policy regarding reading in the content area. If this topic is not addressed, many able students with poor reading skills may be penalized unfairly in social studies, science, and mathematics.

Parental Support

Administrators can create an atmosphere in which parents feel needed to help in their child's education—not only to work on school committees, but also to help their child learn required skills. Some skills simply need more drill or practice, and some ideas may need discussion.

Research on the effect of parents' school involvement on children's progress reports a positive relationship under the following conditions:

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[12] Benjamin Bloom, *Human Characteristics and School Learning* (New York: McGraw-Hill Book Company, 1967).

- **Parents are given specific tasks to do with the children. For example, they receive materials and directions for helping** children at home.[13]
- School personnel provide parents with training as well as with materials.[14]

Administrators can develop a policy that guides teachers to elicit positive, active support from parents for their child's education. If teachers see parents as a source of energy to help children learn, shared efforts can lighten the teaching burden. It is important that parents and teachers feel they are striving together toward a common goal: to help the student learn necessary skills. Since there are currently large numbers of families with a single working parent or two working parents, some schools have arranged for evening meetings with parents to encourage joint efforts. In this arrangement, counselors or teachers may be given school-day release time.

Staff Development

In the past, dollar support for staff development has not been a problem. The problem has been in delivering a well-focused, comprehensive program that serves both student and teacher needs. In a study of 20 Teacher Corps sites, it appeared that there was little coordination among categorical programs. Seldom did personnel from Teacher Centers, Teacher Corps, or other categorical aid programs jointly plan projects for teachers and students. Teachers in the study schools reported that the activities of several federal programs in a school seem to fragment children's education. Also, when there are several staff development programs in a school, they often compete for teachers' limited time. If each categorical program has a director and its own budget, the program becomes the focus rather than children and teachers. Isolated pull-out programs seem to work to the disadvantage of children. In schools where the administrator appoints one person to coordinate several programs, joint planning to meet children's needs and teachers' training needs is more likely to occur. In the face of dwindling dollars, schools more than ever need a well-focused, comprehensive staff development program.

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[13] L. Corno, *Effects of Parent Instruction on Teacher Structuring and Student Participation in the Third Grade: An Aptitude-Treatment Interaction Approach* (Stanford, Calif.: Stanford University, May 1978).

[14] I. J. Gordon, *Early Child Stimulation Through Parent Education.* Final Report to the U.S. Children's Bureau (Gainesville, Fla.: College of Education, University of Florida, 1969).

Choosing A Staff Development Program

Many districts have a budget for staff development. The budget supports a given number of days for teacher release time, attendance at professional conferences, or inservice consultants. During the past four years of studying schools, we have found that principals use these funds in very different ways. For example, some principals allow each staff member to attend two conferences out of a list of several that are deemed acceptable. It is important to follow-up and see how the teachers benefited from the conference. If there is no follow-up, teachers will not have the opportunity to share what they learned with their colleagues.

Some principals use their funds to establish a schoolwide program for training a group of teachers in specific techniques. Those teachers then become trainers for the entire staff.[15] Other programs train a total school or district staff.[16]

Staff development seems most effective in changing teacher behavior and student achievement when the program is schoolwide. For instance, one school requires every teacher to teach the meaning and spelling of at least five key words a week. These words must be central to a course of study. Misspellings are handled the same way in every class. Over a two-year period, this school significantly increased student spelling and vocabulary scores on a standardized test.

A Model For Staff Development

Every staff development model includes a curriculum and a delivery system. Curriculum is the content, and delivery is the where, when, how, and number of participants. A good curriculum with poor delivery, or vice versa, is not likely to be effective in changing teacher behavior.

The goal of one such staff development model is to help teachers learn to manage classroom time effectively.[17] The curriculum is based on research findings, and the delivery system offers personalized instruction and interactive, small-group problem solving. The content of the model derives from research funded by the National Institute of Education, which also provided funds for developing the delivery system.[18]

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[15] *Assertive Discipline*, conducted by Lee Cantor, Fremont, California; and *Classroom Management Training Program*, conducted by Frederick Jones, Santa Cruz, California.

[16] *Increasing Teaching Effectiveness*, a four-part workshop series conducted by Madeline Hunter, Los Angeles; and *Equal Opportunity in the Classroom*, now called *Teachers' Expectations and Student Achievement* (TESA), conducted by Sam Kerman, Los Angeles County Department of Education.

[17] *The Teaching and Learning Institute*, directed by Jane Stallings, Mountain View, California.

Development of the model occurred during a multi-phase study in secondary schools. In Phase I, researchers selected and observed 45 secondary reading classrooms from six northern California school districts to examine the relationship between what teachers do and what students gain in reading. Study results provided some very specific guidelines on efficient instructional strategies to use with secondary remedial reading students. In Phase II, researchers translated these findings into a series of workshops and trained 47 teachers in the Phase I districts and one neighboring district. Half of the teachers were in a training group, and the other half were in a control group that did not receive training until the end of the experiment. The treatment teachers changed behaviors in recommended ways, and their students made greater gains in reading achievement than did the students in the control group. The teachers were enthusiastic about the program and recommended the training to other teachers in their districts. To accommodate requests that were beyond the scope of our staff, we developed a Phase III program, which monitored our trained teachers as they trained other teachers in their districts. Through this three-phase effort, the districts acquired a cadre of teacher trainers, a staff development model, and effective instructional methods for helping students gain basic reading skills.

As noted earlier, students made more achievement gain in classrooms where teachers spent more time instructing, discussing homework, providing considerable supportive feedback, and using oral reading by students in small groups. In this environment, the teacher stayed involved with students throughout the class period. Teachers were well organized and used the available time effectively.

Students made less achievement gain in classrooms where 40 to 50 percent of class time was allocated to written assignments, another 30 to 40 percent was allocated to silent reading, and the remainder was spent grading papers, making lesson plans, and handling social or disruptive interactions. These classrooms did not provide the supportive interaction that remedial students need to make progress. To optimize student gain, these findings suggest that teachers should "get the show on the road" when the bell rings and stay supportively involved during the total class period.

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[18] The early research was carried out at SRI International in Menlo Park, California.

The following is a list of variables found to be significantly related $(p<.05)$ to reading achievement gain:

Positively Related	Negatively Related
Discussing or reviewing classwork or homework	Teachers doing organization or management tasks during class time
Instructing new work	Too much time allocated to written assignment
Students reading aloud	Too much time allocated to working with one student
Focusing instruction on a small group or the total group	Intrusions (loudspeakers, tardy students)
Positive corrective feedback for incorrect responses (rephrased probing or questions)	Uninvolved students and social interactions
Short quizzes	Misbehavior or negative interactions

The goal of Phase II was to change teacher behavior in specific ways. A treatment group and a control group of teachers were observed in the fall, winter, and spring. Only the treatment teachers participated in the five workshops based on research findings from Phase I. Each treatment teacher received a profile of his or her own behavior developed from objective observations in the classroom. A set of specific recommendations were made to each teacher to increase or decrease certain behaviors. The workshops provided assistance on these changes.

Workshop sessions were conducted one week apart—usually from 3:30 to 6:00 p.m. To maximize interactions and full participation, groups were limited to five or six teachers. Although workshop materials were used, the cornerstone of the workshops was encouragement to try new ideas for change. Each teacher operated in a unique situation. Class size, room assignment, and school policies affected the way recommendations were implemented. The trainer listened to teachers' questions and ideas about the research and encouraged teachers to help each other seek solutions to specific problems. All recommendations were examined and adjusted to individual situations of teachers, students, classrooms, and schools.

At the end of the semester, teachers were observed again and behavior change was measured. For the most part, treatment teachers changed behavior according to the midwinter recommendations. A late spring observation indicated that treatment teachers maintained most of their behavior changes. In contrast, control teachers' classes became more lax and less task-oriented. More importantly, the treatment teachers' students made greater reading achievement gains.

Principals can develop a similar model by (1) observing teachers or having teachers observe each other, (2) providing some staff development program, and (3) observing again at the end of the program. It is important to observe and document teaching behavior to be changed by the intervention, so that teachers can be given specific feedback on their behaviors.

Summary

Some of the most important points to emerge from research on effective schooling for students who must gain basic skills are:

- Teachers need to be interactive and directly involved with students to keep them on task.
- Teachers should distribute questions to all members of the class and be supportive and guiding in their feedback.
- Teachers should offer several activities during a class period so that students can develop listening, speaking, reading, and writing skills. This helps students integrate information.
- Teachers need a well-focused, comprehensive, continuous staff development program to gain the skills needed to be effective teachers.
- Schools should allow minimal distractions to intrude on classroom time.
- Schools should have a consistent and enforced policy for absences, tardiness, and misbehavior.
- Schools should seek parental participation and support.
- Effective schools are a friendly place to be—teachers are available to students, schools are kept in good repair, student success is recognized throughout the school.[19]

Teachers need help to effectively teach the students in their classrooms. The onus is upon the school administrative staff to select a training curriculum that is focused on school improvement. Further, the program should be comprehensive and continuous, with opportunities for teachers to receive feedback on their progress. Every program should be evaluated for effectiveness by observing teacher behavior before and after the intervention and then measuring teacher change. The impact on student achievement and absence rates should then be evaluated. The bulwark of public education is being challenged, and it is imperative that the teachers in our schools be prepared to meet that challenge.

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[19] M. Rutter, B. Maugham, P. Mortimore, and J. Ouston, *Fifteen Thousand Hours* (Cambridge, Mass.: Harvard University Press, 1979).

References

Amarel, M., and Stallings, J. "Individual Instruction." In *Perspectives on the Instructional Dimension Study*. Washington, D.C.: National Institute of Education, 1978.

Bloom, B. *Human Characteristics and School Learning*. New York: McGraw-Hill Book Company, 1976.

Coleman, J. S.; Campbell, E. Q.; Hobson, C. J.; McPortland, J.; Nood, A. M.; Weinfeld, E. D.; and York, R. L. *Equality of Educational Opportunity*. Washington, D.C.: Government Printing Office, 1966.

Corno, L. *Effects of Parent Instruction on Teacher Structuring and Student Participation in the Third Grade: An Aptitude-Treatment Interaction Approach*. Stanford, Calif.: Stanford University, May, 1978.

Evertson, C., and Emmer, E. *Effective Management at the Beginning of the School Year in Junior High Classes*. Austin, Tx.: Research and Development Center for Teacher Education, University of Texas, 1980.

Gordon, I. J. *Early Child Stimulation Through Parent Education*. Final report to the U.S. Children's Bureau. Gainesville, Fla.: College of Education, University of Florida, 1969.

Good, T. L. *The Missouri Mathematics Effectiveness Project*. Columbia, Mo.: School of Education, University of Missouri, 1980.

Jencks, C. *Inequality, A Reassessment of the Effect of Family and Schooling in America*. New York: Basic Books, 1972.

Mosteller, F., and Moynihan, D., eds. *On Equality of Educational Opportunity*. New York: Vintage, 1972.

Herrnstein, R. "IQ." *Atlantic Monthly* 228 (September 1972): 43-64.

Rutter, M.; Maughan, B.; Mortimore, P.; and Ouston, M. J. *Fifteen Thousand Hours*. Cambridge, Mass.: Harvard University Press, 1979.

Stallings, J. "Implementation and Child Effects of Teaching Practices in Follow Through Classrooms." *Monographs of the Society for Research in Child Development* 40 (December 1975): 50-93.

Stallings, J.; Cory, R.; Fairweather, J.; and Needels, M. *A Study of Basic Reading Skills Taught in Secondary Schools*. Menlo Park, Calif.: SRI International, January 1978.

Stallings, J.; Needels, M.; and Stayrook, N. *How to Change the Process of Teaching Basic Reading Skills in Secondary Schools*. Final report to the National Institute of Education. Menlo Park, Calif.: SRI International, 1979.

Stallings, J., and Robertson, A. *Factors Influencing Women's Decisions to Enroll in Elective Mathematics Classes in High School*. Final report to the National Institute of Education. Menlo Park, Calif.: SRI International, 1979.

Excerpts from The Unfinished Educational Agenda for the 80's

Shirely A. Jackson, Director

State and Local Education Programs
U.S. Department of Education

Speech given at the North Carolina Reading Association Meeting
Charlotte, North Carolina, March 1982

I. CHARACTERISTICS OF PROGRAMS AND SCHOOLS THAT WORK FOR POOR STUDENTS

It is well documented that schools are not making an impact upon student achievement independent of their family backgrounds and general context (Persell, 1977; Sloan 1978: Coleman, 1966). Numerous research studies, Goldstein (1977) as well as National, State and local testing programs report that poor Black students consistently fail to score as high on standardized achievement tests as their middle-class counterparts. Although there is agreement in the literature that low socioeconomic students do more poorly academically than their more priviledged, middle-class counterparts, there is not a consensus on the cause of the underachievement, nor on the solution to the problem. Persell (1977) rightly points out that the existing differences are viewed as causes of low achievement, when no such casual evidence exists.

The studies of Coleman (1966), Jensen (1972), and Jencks, (1974), led many to believe that schools could not be effective for Low SES students because of inherent deficiencies, evironmental and/or cultural factors. A new set of studies, the School Effectiveness Studies, indicate there are schools that are instructionally effective for low-income students. This, these researchers contend, indicates that schools can be made effective for low-income students (Edmonds, 1978). These studies go on to identify the characteristics of schools that are effective for the poor (Weber, 1971; Edmonds, 1979; Brookover and Lezotte, 1979; Clark, Lotto, McCarthy, 1980).

"School Effectiveness" studies show hope and how, pointing out and describing schools that are instructionally effective for low socioeconomic students. The fact that these schools exist proves that the possibility of having good schools for the poor exists and that school improvement for this clientele is within the locus of control of the schools.

The identified schools have five (5) characteristics:

1. There is strong instructional leadership exerted, most often by the principal.
2. There is an orderly, positive school climate.
3. There is an emphasis on specifying objectives and expected achievement in the basic skills. Objectives then are carefully monitored for mastery.
4. There is a belief that all children can learn and master the basic skills objectives. There are high levels of expectation of success for students and teachers.
5. Assessment is an integral part of the program and results are used to improve instruction and for accountability.

There is a specific need to examine document and replicate broadly the characteristics of effective schools which are in the locus of control of the schools. The identified characteristics can be used to guide further exploration into the search for these effective schools and why they are effective. A recurring characteristic noted among effective schools is "strong instructional leadership", usually provided by the building principal. This fact has definite implications for the staff development of principals to include information on instructional effectiveness characteristics and how to bring it about for low-income students.

Any school district interested in school improvement for the poor must seriously review these five characteristics and consider designing means for operationalizing them in their schools. Making schools effective for the urban and rural poor must definitely be on our unfinished agenda for the 80's.

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WHAT WORKS? WHAT DO YOU KNOW ABOUT INSTRUCTIONAL VARIABLES ASSOCIATED WITH EFFECTIVE CLASSROOM TEACHING OF BASIC SKILLS?

Examination of the research of Brophy and Good, Bloom, Carroll, Block, Cohen and Stallings show the fifteen (15) variables associated with effective instructional programs in the classroom. These variables must be operational being taught to teachers and administrators and brought into every classroom as a part of each teacher's normal teaching strategies. The 15 steps include:

1. Determination of what is to be taught based on a predetermined developmental scope and sequence of content and skills (curriculum) and predetermined standards of achievement and mastery levels/indicators. (What is to be taught? What level of mastery constitutes successful achievement? Based on what assessment tool and scale?)
2. Diagnosis of students' instructional levels and instructional skills strengths and weaknesses in relationship to objectives and standards. (What does each student know and/or need to learn in relationship to the curriculum objectives?)
3. Development of instructional plans and strategies to meet the concept development/skills needs of each child - (Not an emphasis on the coverage of chapters/pages) (What are the best strategies/lesson sequence and lessons to use in getting across the identified concepts and skills?)
4. Placement of students in proper level instructional lessons and materials geared to their diagnosed needs and levels. (What lessons and materials are you going to use in relationship to student needs and levels?)
5. A coordinated program of direct instruction and independent practice at the appropriate skills development level of each student. (How are you going to introduce/teach the skill directly? What materials can you use to give students practice on what you taught?)

   Students understand the purpose for the learning activity assigned and see the connection between the skills being presented and ultimately obtaining functional, utilitarian literacy skills. (Do students know why they are doing the activity, ie. worksheet/workbook exercise, in relationship to what they are expected to learn/master? Can they see how this skill can help them later?)
6. Maximum time on the assigned tasks by students and maximum direct instructional interaction time between teacher (may be surrogate as in peer tutoring) and student. (Are students actually attending during direct instruction and follow up? Is direct teaching taking place?)

7. Use of multiple materials to develop concepts/skills with an instructional consistency of methods among the materials. The use of the materials consistent with their author's design. (Do the approaches taken in the multiple materials reinforce each other or conflict?)
8. Skills are systematically, sequentially, and meaningfully developed with mastery as a goal. (Are you hopping from page to page and lesson to lesson with no regard for mastery of objectives (concepts and skills) and sequencing identified earlier as the centrix/focus of your instruction?)
9. Skills that are learned are immediately applied - for example in reading, there is an emphasis on reading for enjoyment and information. (After a skill is taught, is time set aside for using that skill in a planned structure situation?)
10. Communications skills instruction is integrated and designed to be mutually reinforcing (e.g., reading, writing, oral communications), not taught as isolated, separate subjects. (Are you artificially separating the communication skills in teaching?)
11. Tests, instruction, and materials are intricately interrelated and systematically reinforce each other. (Do you test on one concept/skill, instruct on another and assign materials on still another set of concepts/skills?)
12. A management and record keeping system which tracks/monitors the progress of each child continuously and that acts as a diagnostic and summary instrument which points up areas of pupil achievement and needs is kept. (Do you have a system which tells which skills/content have been mastered by which child and what the remaining needs are?)
13. The teacher believes that each student can master the objectives and seeks the cause of failure in the instructional program, not the student. (If a student fails to learn a concept of skill do you examine possible causes, such as the student's readiness for concepts/skills, clarity of presentation, adequate reinforcement, other possible causes rather than that the kid is just dumb?)

14. A well coordinated basic skills program, i.e., instructional consistency between intervention programs such as Title I, Special Education, etc. and classroom teachers' programs. Resource personnel (e.g., paraprofessionals, aides, volunteers) are trained on how to assist the teacher before they are placed in the classroom - their programs being coordinated with the classroom teacher's instructional goals and programs. (Is there only one well integrated instructional program for each student receiving multiple services? Has the lead roles and reinforcement roles been identified? Are all instructional providers working on the same skills/concept with the student, not using conflicting approaches and materials?)

15. There is planned, active parent involvement with a focus on shared decision making and parents as reinforcers of instruction. There is frequent communication between the teacher and parents related to pupil progress - positive as well as negative. (Are parents involved in a meaningful way in decision-making? Are parents provided with ways and means to reinforce classroom instruction? Do parents know where there children are in the instructional sequence? When he/she excels or is behind?)

All researchers agree that the teacher is the critical element in a student's learning process. The quality of a teacher's instructional and classroom management skills makes a difference in his or her ability to effectively teach basic skills. The fifteen (15) instructional variables reviewed show up repeatedly as essentials to good teaching in the research and in conversations/interviews with effective teachers and administrators in effective schools. On the unfinished agenda for the 80's we must have the quest for finding "what works" and then we must design and implement a strategy for making what we know work; a mandated part of every classroom teacher's repertoire of teaching strategies. Dogged monitoring of classroom implementation by the administrator, following staff development becomes an imperative to putting what we know to work in the classroom.

The litany of questions on schools effectiveness will certainly steal the spotlight in the 80's.

- Which schools teach which things uncommonly well?
- Which schools teach things poorly, if at all?

- What instructional innovations that are being done at two or more schools could be disseminated to the entire schools system?
- Which approaches are some schools clinging to in the face of overwhelming evidence that they don't work?
- How would you rate the principals of those schools? Good? Bad? Indifferent?
- Are there schools serving essentially similar populations doing a significantly better job? Why?
- How can one best absorb the routine and report on what is going on?
- Do any or all of the local elementary schools use certain instructional methods of teaching reading? Does this seem to make any difference? Which approaches seem to work better for what sort of children?
- Which schools in the less affluent parts of town routinely surpass their companion schools in math and reading achievement? Why?
- Is it something as un-Xeroxable as an outstanding principal or something as easily adopted as a textbook or instructional approach?
- Are there instructive correlations between achievement scores and the amount of homework assigned?
- Are there observable differences among teachers with respect to ease with their subject matter? Does these translate into greater achievement gains for students?
- What are some of the successful techniques for establishing the classroom management techniques and the disciplines and order that make learning possible? Can these be "taught"/transferred to principals and teachers? What are the best methods of achieving this transfer of successful behaviors?
- What is the role of the various types of testing programs (i.e., competency testing program, standardized tests, teacher-made/publisher tests, etc. in instructional improvement? Should the test dictate what we teach or should what we teach dictate what we test? What is the implication of this for selection standardized tests?
- What are the best ways to get schools to use the results of research in setting an instructional philosophy an underlying theoretical base, and in program design, implementation and evaluation?

Excerpts from

Basic Skills Improvement Program--Management/Evaluation Design

Shirley A. Jackson, Director

Basic Skills Improvement Program
U.S. Department of Education
September 1980

[Note: The following underlying program strategies are those addressed by Dr. Jackson regarding programming for basic skills improvement.]

1. A proposed basic program cannot be an add-on, and it cannot be an effort to develop a basic skills program apart from the regular curriculum. The basic skills must not be taught in isolation from the rest of the program or by staff that works apart from their colleagues. The creative reforms being sought by the Basic Skills Program are of existing efforts.

2. Since it is understood that improvements in the basic skills cannot take place in isolation from the rest of the school program, it follows that they must be taught and learned throughout the school program, and consequently whatever reforms are to be introduced must involve the coordination of the total school program. Coordination requires no complex design; it is a matter of enabling people to work together on a common set of goals and objectives and to bring together their resources in meeting these goals and achieving those objectives.

3. The reforms must not be piecemeal, either in the educational practices and methods being proposed or in the groups being served. The whole school system or the whole school should be involved, and whole groups of students must be targeted.

4. Stereotyping exists in school programs as to race, sex, ethnic group, religion, language, economic status, handicap and age. The changes and improvements being sought must include the elimination of these.

5. Before an idea or practice can be successfully or meaningfully introduced into an educational program, it is obvious that is might have the backing of the leadership, not only within the school but from

the larger community, including business, labor, industry, and parents. Such commitment is not easy to gain from such a wide spectrum of groups, but the extent of that commitment is a measure of the promise of the proposed reform.

6. The evidence is clear that students work more effectively in the schools when their parents know what their children are learning and when they have been able to participate in the development of the school's program. Schools have long known that the guidance and discipline parents give their children cannot be duplicated by institutions, but they still need to know how parental involvement can be strengthened and better utilized in order to improve student learning, particularly in areas as fundamental as the basic skills. Therefore, the use of parents--and other volunteers--in the planning of the program, in its implementation, and in weighing its effectiveness is a vital part of any proposed reform.

7. The changes being sought should be far reaching and fundamental. Such changes cannot easily be brought about. They require an understanding of the need which comes from thorough study involving many individuals and groups; they require careful planning based on that study; they require the definition of both short term and long term goals; and they require a systematic and periodic assessment of results.

INSTRUCTIONAL MATERIALS: AVOIDING THE PERILS OF MIX AND MATCH

by

Elaine Lindheim

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Instructional Materials: Avoiding the Perils of Mix and Match

Elaine Lindheim

The concept of "mix and match" may not be an American invention, but the practice ranks high as a national institution. The idea is quite simple. Just begin with a few standard, interchangeable parts, add several options, and let free choice prevail. We have mix-and-match wardrobes (ten different outfits from the same four garments), mix-and-match vacations (stop at as many cities as you'd like for the same roundtrip fare), and mix-and-match diet plans (select two fruits from List A and three vegetables from List B). A fast food franchise has made its fortune by finetuning mix-and-match so that each of us can "have it our way." On the West Coast, where instability and earthquakes are both facts of life, there are even mix-and-match dating services—companies that specialize in all sorts of unusual pairings. In secondary schools, electives provide students with mix-and-match options. Many high schools offer alternative ways to earn a high school diploma in another version of the mix-and-match game.

Materials Mix and Match

There is one important educational area, however, where mixing and matching is not practical. That area is the selection of teaching materials to use in implementing skills-based instructional programs. Suppose, for example, that your school is about to institute a basic skills instructional program. Perhaps your district or the state requires students to pass a proficiency examination in order to graduate. Each school has been directed to design one or more instructional programs to prepare students for the competency test. If staff members are permitted to take a mix-and-match approach to selecting instructional materials associated with their programs, or if they are permitted to choose from a wide range of "somewhat related" materials in a well-meaning attempt to provide for their individual likes and dislikes, the results may be less than satisfactory. When students take the competency test, they may not show hoped-for gains in proficiency, no matter how carefully and thoroughly teachers have instructed them. Staff frustration mounts as parents and the public complain of the school's inability to deliver a program that works. An unexpected and uncomfortable situation arises because of an aspect of materials selection that was never considered.

The Concept of Congruency

To understand the relationship between the instructional materials selected for a basic skills program and the results the program can achieve, it's necessary to isolate the two major parts of any skills-based program—the *activities* that take place during instruction and the *assessment procedures* that are used to measure the results of that instruction. In today's evidence-oriented educational atmosphere, assessment procedures have taken on new importance. Basic skills programs, more often than not, are associated with some sort of formal testing program, which is almost always designed by a group other than those who create the basic skills instructional materials. Test publishers, for example, rarely create instructional materials to match their examinations. Although materials may be accompanied by sets of progress-monitoring examinations, those tests are seldom accepted as *the* competency exam.

Up to now, testing specialists and teaching specialists have each been concerned only with their own areas. Test developers have been thinking measurement while instructional materials developers have been thinking instruction. Neither group has been concerned about the match between their work. Fortunately, there is one important similarity between them that may compensate for their separate approaches: each group follows the same development process in creating its product. Both begin by isolating their *targets*. For the test developers, these targets are the basic skills to be measured. Their task is to define those skills clearly enough so that test questions can be written assessing the learner's mastery of the skills. Test developers must determine the precise *nature of the skill* as well as the *content* and the *performance mode* to be used to measure attainment of that skill.

In designing a mathematics test, a test developer might select problem solving as one skill to be measured. The developer must determine the nature of this skill. Will it be conceptualized as, for example, the ability to arrive at an accurate solution to a problem when given the exact numerical data necessary to compute that solution? Or will it be defined more broadly as, for instance, the ability to generate alternative solution strategies for use in a problem setting? Quite clearly, the first conceptualization of problem solving will yield test questions that are quite different from those generated by the second definition of the skill.

After the nature of the skill has been defined, the content to be used in measuring learner proficiency must be selected. Will students be solving problems that are abstract and purely theoretical, or will the problems be drawn from real-life situations and experiences? The content selected will determine the nature and the difficulty of the test questions.

Finally, the performance mode for testing must be stipulated. Will students be given a problem and a choice of several answers, or will they be required to work out their own answers? What criteria will be used to evaluate the correctness and incorrectness of responses?

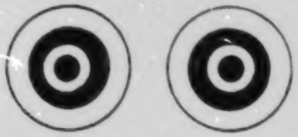
By the time a test developer has determined the nature of a skill and the nature of the content and performance mode to be used in measuring that skill, a very definite testing target has been established.

A well-defined testing target

Developers of instructional materials also must establish targets for their work. Writers creating a set of basic skills mathematics materials might decide to use problem solving as one unit in a set of materials. When the materials are used, the instruction students receive and the activities they are asked to complete will depend on the writers' conceptualization of the skill, the content chosen to illustrate explanations and problems, and the performance modes selected for student activities. These developers also have established clear-cut targets.

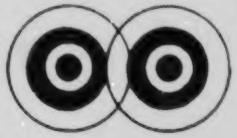
A well-defined teaching target

Because tests and materials each are based on targets, the degree of *congruency* between a given set of materials and a given test can be determined by comparing the targets associated with each. Such a comparison should result in one of the following three states. It may be discovered that the targets are totally incongruent.



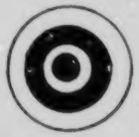
Totally incongruent targets

There may be some degree of overlap.



Targets that are somewhat the same

When instructional materials and assessment procedures are *entirely congruent*, the two targets become one and the same.



Totally congruent targets

The Importance of Congruency

Determining how well targets for instructional materials and basic skills tests match is extremely important. It also can be quite difficult. The task requires analyzing each component separately to devise as clear a picture as possible of the nature of each target. Often there are no detailed descriptive schemes accompanying either a test or a set of instructional materials. The potential matchmaker must attempt to devise these descriptions after the fact. Other times, the description that is provided may be more misleading than true. The same label may be applied to two quite different skills. Two different sets of mathematics materials, for example, might contain units on "problem solving," which bear little real resemblance to each other. The individuals responsible for congruency-analysis must be attentive enough to detect such disparities. They must never assume that the name given to a skill defines that skill. There are probably as many different versions of any single basic skill as there are materials and tests to match it.

Although it isn't easy to determine the congruency between various sets of materials and a program's test targets, the comparison must be made if positive instructional results are to occur. When a school's staff understands the relationship between the two sets of targets, they will certainly realize what is at stake for them.

Time on task and *appropriate practice* are two of the most powerful research-derived insights about the effects of instruction. These principles tell us that teachers must instruct students and then give them ample opportunities to practice the instructed skills. Each time students use a set of instructional materials, they practice the skills promoted by those materials. Their task-oriented time is being devoted to the particular targets associated with the materials. If the materials' targets are congruent with the tests' targets, then the more student time that is spent using the materials, the more dramatic the improvement in test results should be. If, however, the materials' targets do not match the tests' targets, then the test results will not necessarily measure the classroom instruction.

Teachers may do a first-rate instructional job using outstanding instructional materials. Nevertheless, *whenever instructors and materials are promoting targets other than the ones that will be assessed, the results will be disappointing*. Unless test targets can be changed to coincide with instructional targets (a highly unlikely possibility if the tests are mandated rather than optional), instructional efforts to improve student performance on those tests will continually fail. It will not be the quality of teaching skills or the degree of teacher dedication that is at fault. Teachers simply will have been aiming at the wrong targets.

An Example of Target-Matching

The following illustration offers a possible solution to the problem of mismatched instructional and measurement targets. It also demonstrates how a principal and a school's staff might go about applying the concept of congruency when selecting basic skills instructional materials.

The example itself, although hypothetical, is based on materials that are part of the Detroit High School Proficiency Program—a minimum competency assessment program used in the Detroit, Michigan, public schools. This program has as its measurement targets 12 basic skills, four each in reading, writing, and mathematics. Specially designed instructional materials that are entirely congruent with those targets have been devised and distributed throughout the district. Local schools also have the option of selecting instructional materials on their own.

One of the four reading skills is titled "Identifying Main Ideas." The description of that skill, provided in a program manual supplied to each teacher in the high schools, is as follows:

> After reading a selection from a news story, a magazine, or a general information publication, the student is to identify its main idea by choosing from four statements the one which most accurately and comprehensively presents the central point of that selection.

One school's staff decided that it wanted to purchase basic skills reading materials that could be used in promoting the main idea skill. A preliminary survey turned up the following three options.

1. A reading series that contains a unit entitled "Reading for the Main Idea." The reading selections in this unit range from short stories to poems and plays. Students are to respond to these selections by composing an appropriate title for each one and by comparing their title with the author's title for the selection.

2. A vocabulary-building program that includes a group of exercises on "Developing the Main Idea." Each exercise requires the student to read a short article and choose the correct word to fill each of a number of blanks in that selection. Each blank represents a word deleted from the text. Students are to use context clues as well as their sense for the overall meaning of the passage in supplying the missing words.

3. A language-arts workbook that offers a section on "Finding the Main Idea." This section presents real-life content such as business letters, reports, editorials, and first person essays. Writing directly in the workbook, students are to underline the main idea sentence in each paragraph of a selection. If they cannot find a single sentence containing the main idea, they are to write a topic sentence that they feel would be appropriate.

The evaluation committee members found all materials well-written, instructionally sound, and particularly appealing to high school students—especially to the more reluctant learners. What the reviewers were keen enough to realize, however, was that not one of the three options would serve their needs. None of the materials contained a skill that matched the main idea skill in their testing program. That program requires students to compose a single-sentence statement that accurately and comprehensively presents the central point of a reading selection. Neither titling a selection (Option 1), nor supplying some of its words (Option 2), nor even finding its topic sentences (Option 3) is an *equivalent* reading skill. They may be related skills, and they may seem to "mix and match" well, but in reality they represent three entirely different competencies. Furthermore, the content of the materials does not coincide with the reading selections presented in the test. Quite wisely, the committee members rejected all three options and decided to keep looking for more suitable materials.

Some Potential Pitfalls

Congenial colleagues, sparkling superficialities, and *relaxed rigor* represent three major obstacles to effective match-making. Forewarned of these problems, a principal may be able to avoid them.

The first obstacle—congenial colleagues—reflects a problem caused by staff members who are good natured and don't want to offend. Even though they may not agree with the judgments of others on the faculty, they demur rather than dissent. As a result, even if they recognize that proposed materials will not match, they are reluctant to share their concerns. Their analysis never gets heard and hence goes unheeded. Principals who are aware of this "nice person" phenomenon may wish to seek out the more outspoken and assertive of their teachers to serve as leaders in materials selection groups.

Sparkling superficialities are brought to each school through the courtesy of American enterprise and the entrepreneurial spirit. The educational publishing industry realizes that back-to-basics readily translates into big bucks if instructional materials are shrewdly packaged and marketed. Hence, basic skills banners now adorn almost every materials catalog in the country, and magic buzz words such as "real-life skills" and "functional tasks" are used to promote almost every basic skills product. Slick packaging and clever merchandising are hard to resist, but principals and teachers must become effective consumers who are alert to a product's true worth rather than just its packaging.

Of the three obstacles, relaxed rigor may be the hardest to overcome. It is difficult, demanding work to analyze instructional materials and assessment targets in enough detail to determine if they are congruent. It is much easier to relax one's standards and let potential mismatches slip by. It does not take much effort to apply loose standards since almost any targets will be judged congruent if the matching criteria are general enough. The easy path is rarely the best one, and the stakes are too high to permit such leniency. Administrators must remain alert to ensure that quality control mechanisms are built into every materials review operation

Five Key Steps

The following five steps summarize the actions a principal or supervisor might take in implementing basic skills instructional materials selection.

1. Select teachers for curriculum and materials selection committees who can think clearly and analytically and who are able to assert themselves professionally.

2. Provide selection committees with clear definitions of the basic skills targets that are to be tested.

3. Require committees to generate clear definitions of the basic skills target in any instructional materials considered for development or adoption.

4. Insist that committees justify their learning materials selections on the basis of congruence with the program's target skills.

5. Monitor the committees' work to ensure that rigorous quality control standards are applied.

Making a Match

It takes hard work, a committed faculty, and perceptive administrators to develop basic skills instructional programs perfectly matched to appropriate targets. Frequently, commercial materials that are congruent to local targets cannot be found and must be developed locally. The school's leaders can offer support to such development efforts, and successful materials can be shared among schools facing the same basic skills targets. At first it may be difficult to convince teachers that their willingness to mix and match a wide range of easily available materials really works to their disadvantage. Once they can be shown the benefits of aiming at the right targets, they should become confirmed believers. Increased student achievement should help make those beliefs last.

References

Baker, Robert L., and Schutz, Richard E., eds. *Instructional Product Development.* New York: Van Nostrand Reinhold Company, 1971.

Popham, W. James, and Lindheim, Elaine. *Making Minimum Competency Programs Work.* Los Angeles: Instructional Objectives Exchange, 1979.

Tyler, Louise L.; Klein, M. Frances; and others. *Evaluating and Choosing Curriculum and Instructional Materials.* Los Angeles: Educational Resource Associates, Inc., 1976.

SEVEN COMMON THEMES IN BASIC SKILLS PROGRAMS

What makes NDN* basic skills programs successful? A review of 35 programs revealed these common themes:

1) Diagnosis -- Most of the programs use some means to determine how much each student knows as a basis for placement and the selection of appropriate materials;

2) Record keeping -- A common practice among the programs is to require students as well as teachers to keep track of student performance;

3) Involvement -- Students and parents are encouraged by many programs to take partial responsibility for student learning;

4) Positive reinforcement for students;

5) Drill and practice to encourage student proficiency;

6) Common sense -- One program, for example, advocates that students slow down, if necessary, to master content rather than speed "to get through the book"; and,

7) Organization -- Teachers need classroom management techniques "to make learning easy for all students," well organized classroom space and understanding of how to use time and timing.

WHAT MAKES EFFECTIVE ADOPTIONS

An effective adoption of an NDN* program depends on five key components, according to a survey of directors of NDN developer/demonstrator programs. They are:

1) Commitment on the part of the school or district making the adoption;

2) The involvement of teachers in making decisions about and initiating the program;

3) Inservice training for teachers and others who have to implement the program;

4) Enthusiasm on the part of the trainees and trainers; and,

5) Follow-up assistance provided by the Developer/Demonstrator after the adoption is made.

*NDN - National Diffusion Network (U.S. Department of Education)

Source: WISCONSIN state facilitator newsletter, Volume 4, Number 1, Wisconsin Department of Public Instruction, January 1981.

COORDINATING BASIC SKILLS IMPROVEMENT EFFORTS

Excerpted from:

Background Information and Implementation Procedures

Source: Success Through Coordination - A Hands-On Guide to the Coordination of Basic Skills Efforts by Doris H. Hundley, Thomas C. Taylor, Barbara L. Wicks, and Dr. Emanuel Berger (Principle Authors). Washington, D.C.: Children (1st) First, Inc. (under contract with Basic Skills Improvement Program, U.S. Department of Education, Washington, D.C.), 1981.

BACKGROUND INFORMATION

This section highlights the results of research in the area of coordination. It identifies significant elements in coordination and cites the opinions of experts in the field.

1. What are the Basic Skills?

Basic Skills refers to a continuum of instruction in the areas of listening, speaking, writing, reading, and mathematics.

2. How is coordination defined?

Coordination:

- may be a strategy for agreement on common goals and definitions and accompanying validation of objectives
- implies a concept of compromise and engenders appreciation for the contributions of others
- is the process of stimulating and increasing cooperation between two or more programs/projects sharing common goals and engaged in similar activities
- requires communication and may involve the centralization of control
- means cooperation among teachers in the individualization of instruction
- means strengthening inter group/interracial relationships
- is collaboration and cooperation among agencies (state, local, school), and among administrators within an agency
- is collaboration with private and non public schools, community agencies, and private industry
- means the commitment of top level management to the process

3. What is the rationale for coordination?

- The United States Department of Education is encouraging the coordination of energy and of resources to improve the delivery of instruction in basic skills.
- Competing and possibly conflicting demands on teachers stipulated in available programs, together with ongoing local programs of basic skills education, may increase conflict and increase work load. Coordination is proposed as the remedy.
- Use of available resources can be enhanced through coordination: Teachers manage the delivery process through the allocation of resources such as referrals to other agencies for psychological and other health services and the use of aides and other supportive personnel. The teacher controls the students' access to these resources, determining the nature, the quality, the utilization, and timing of their accessibility.
- The increased intensification of needs for greater resources makes coordination increasingly attractive.

4. What does the literature say about coordination?

- Participants share resources (Rubin, 1980).
- Each is dependent on others for accomplishment of work that each alone could not accomplish (Rath & Hagans, 1978).
- There is a willingness to align one's own purposes with those of others, and to negotiate mutually acceptable compromises (Trist, 1978).
- There is a common understanding of roles and responsibilities (Rath & Hagans, 1978).
- Mutual adaptations in a number of different areas will become necessary (Aiken & Hage, 1968).
- There are: (1) active working partnership among individuals and organizations; (2) shared responsibility and authority for policy making; (3) equal investment and benefits for participants; (4) common understanding of expectations, responsibilities and con-

straints; (5) interdependence in carrying out activities (Thompson, 1980).

5. How does coordination evolve?

- Coordination usually requires individual and organizational changes. Phases of activities loop, inter-weave, or run simultaneously. These phases are:

—identify/modify constraints/opportunities
—mobilize support
—engage in planning
—provide training and assistance
—implement by topic, site, population, or organizational unit
—design and conduct monitoring with provisions for appropriate communication, participation, and motivation. (Roberts, 1980).

- Stages of coordination efforts discussed by Rubin (1980) are:

—formulation = determination of common interests, commitment, leadership by, "a few dedicated people"
—maturation = issues of purpose are resolved, policies developed
—permanence = proven success leads to high credibility and long term success

6. What are first steps to put coordination into practice?

- Consider constraints and opportunities. They fall into three categories: resources, motivation, and leadership. (See chart at right.)

CATEGORIES	CONSTRAINTS	OPPORTUNITIES
Resources	An organization with no surplus reserves available could hardly afford joint programs—there must be some slack in the resource base—before any cooperative venture is likely (Aiken and Hage, 1968).	Effective programs have used these strategies: (1) reallocation of funds to buy competent staff (2) reconsideretion of priorities resulting in reassignment of staff and/or tasks or (3) negotiation by the low-resource group with the higher resource groups to contribute to the coordination effort in ways demanding less time or expertise.
Motivation	Two major barriers exist: (1) a desire to rely on the security of content expertise when managerial or process expertise is more appropriate; and (2) a desire to co-opt or dominate another individual or group when an egalitarian attitude is essential to success.	When collaboration is effective there is common understanding of expectations of what each is to do and of the constraints under which each is working (Rath and Hagans, 1978). At every phase and level of activity collaboration requires work restructuring and continual task redefinition (Pasmore et al, 1978; Rukin, 1980, Trist, 1978).
Leadership	Coordination is inhibited when there is a lack of strong leadership, and when those involved have insufficient authority to influence decisions and actions (Rath and Hagans, 1978).	Two different strategies help to reduce barriers. One requires negotiation between organizations or by members of an action set to establish operating procedures that ensure equal power and participation (Thompson, 1980). The second strategy is described as follows: "Leadership with action sets will be assumed by the most powerful of influential organization, and the greater the concentration of power in the hands of one organization's authorities, the easier the action set coordination will be." (Aldrich, 1979).

7. What are the next steps?

- Plan.

In selecting the area of coordinative activity, team members should: (1) mutually develop the plan (Congreve, 1969); (2) have realistic parameters (Gross and Mojkowski, 1977); (3) deal with real issues (Congreve, 1969); (4) focus on a specific project or task (Rath and Hagans, 1978); (5) determine a narrow focus, with few objectives, leading to accomplishments that bring about clear improvements and which provide products or services that would otherwise be unavailable (Rubin, 1980).

- Secure Commitment and Support

Techniques for encouraging commitment include: (1) establishing an initial success (Congreve, 1969); (2) giving notice to advocates in the organization supporting collaboration; (3) organizing advocacy campaigns, publicizing exemplary practices---, and working at achieving a positive image (Rubin, 1980).

- Provide for Training and Assistance.

Techniques for training include:
(1) demonstrations
(2) experimental learning
(3) face to face communication
(4) quality materials/clear information
(5) concrete activities/assignments
(6) regular in-school meetings
(7) cross-school meetings
(8) use of incentives

8. What are the final steps?

- Implement Step by Step

Introduce coordination cautiously, selecting an area of activity that is relatively "safe", and will bring a quick initial success. At the operational level there should be careful sequencing of tasks and specific divisions of labor (Gross and Mojkowski, 1977).

- Communicate.

Communication requires attention throughout all phases of activity. Consideration must be given to the mechanisms and to the nature, amount, and purposes of messages.

Effective communication requires both formal communications (e.g., routine regular documentation of interagency materials), and a strong informal system (e.g., volunteering of information between peers).

- Monitor.

Members of the team should participate in the design of the monitoring system.

Specific approaches might include:
—an action research model
—participant observation resulting in a descriptive analysis
—systematic documentation by team members followed by document analysis
—external study of elements selected by team members.

In Conclusion:

Coordination is perceived to be a valuable strategy for the improvement of basic skills instruction. It may or may not be. Coordination should occur:

- where it is feasible and desirable to share resources
- where several groups can benefit from shared information
- where the same task needs to be accomplished by several groups
- where the needs of one child are satisfied by the knowledge and skills of two or more teachers.

The bottom line is service to children.

IMPLEMENTATION PROCEDURES

IMPLEMENTATION PROCEDURES

APPROACH

This section of the handbook provides some specific assistance in the planning, implementation, and improvement of coordination procedures. It consists of these major sections:

- A Procedural Model Based on Coordination Elements and Procedures
- A Step-by-Step Model for Establishing Coordination Activities in SEAs and LEAs
- A Summary Roster
- An Activity Planning Chart
- A Flow Chart for Program Assessment and Planning
- Tips to Assure Success

Model Based on Coordination Elements

This model is based on the Coordination Elements and the Coordination Procedures identified in Figures 1 and 2. Refer to these lists for ideas. Establish a time frame for each of the ten areas.

1. Commitment is established as team members define priorities and identify contributions which can be made by the participants.
2. Participants are selected as priorities are established.
3. Specify a leader, recorder, and any other functions considered necessary for communication and coordination within the council.
4. All members contribute to the development of a philosophy. The philosophy serves as a standard against which council decisions are measured. The philosophy includes beliefs about students, curriculum, administrators, and teachers.
5. Council planning procedures and time frames are established.
6. Goals are selected and developed as project needs and operational procedures are identified.
7. Plans are based on needs, strengths, and available resources.
8. Assessment plans include evaluation of program status, methods, personnel, materials, and services. Continuous assessment is a necessary process.
9. Coordination activities are implemented.
10. Based upon evaluation, coordination activities are revised as appropriate.

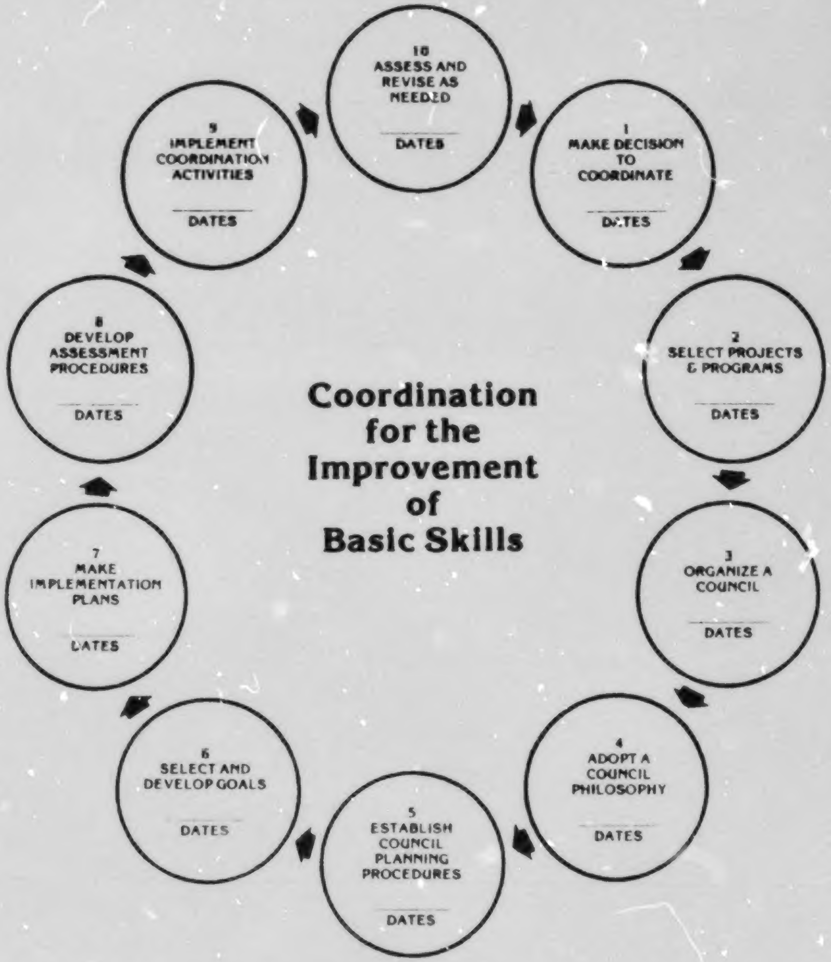

Coordination for the Improvement of Basic Skills
1 MAKE DECISION TO COORDINATE
DATES
2 SELECT PROJECTS & PROGRAMS
DATES
3 ORGANIZE A COUNCIL
DATES
4 ADOPT A COUNCIL PHILOSOPHY
DATES
5 ESTABLISH COUNCIL PLANNING PROCEDURES
DATES
6 SELECT AND DEVELOP GOALS
DATES
7 MAKE IMPLEMENTATION PLANS
DATES
8 DEVELOP ASSESSMENT PROCEDURES
DATES
9 IMPLEMENT COORDINATION ACTIVITIES
DATES
10 ASSESS AND REVISE AS NEEDED
DATES

Figure 1

Coordination Elements

1. Identifying program agencies in the local school or district
2. Joint planning with other programs and projects
3. Joint assessment of needs
4. Joint pupil assessment
5. Thorough study of Federal, S.E.A. and L.E.A. guidelines
6. Formation of PAC's (Parent Advisory Councils)
7. Use of joint policy making councils
8. Use of Migrant Record Transfer System
9. Consolidating funds where legal
10. Formulating joint diagnostic/prescriptive teaching techniques
11. Use of colleges for staff development
12. Conducting joint seminars and workshops
13. Joint funding for supportive services (medical, mental health, psychological, auditory, vision)
14. Intervisitations of staff of different projects
15. Exchange of teachers among projects
16. Circulation of newsletters and printed materials
17. Use of public awareness techniques—TV, radio, films, videotapes, speakers
18. Centralized computer center for exchange of data
19. Joint purchasing of supplies to save money
20. Joint payrolls
21. Superintendent's Councils
22. Regional policy boards
23. Conferences with representatives from federal program agencies
24. Joint monitoring of coordinated projects
25. Joint financing of evaluation teams
26. Centralized media centers (joint funding and staffing)
27. Centralizing administrative staff
28. Centralizing supervisory staff
29. Joint financing of delegates to conventions and shared reporting
30. Inter-agency evaluation of children with special needs to reduce stress on children
31. Joint financing of S.E.A. and L.E.A. site visits
32. Organizing block grants for cultural activities and experiences
33. Joint textbook selection committees to avoid duplication and to stretch finances
34. Joint letters of concern to federal program agencies to increase impact
35. Joint lobbying
36. Formation of proposal writing teams representing involved federal program agencies to build up coordination at the "grass roots level"
37. Informal meetings to keep lines of communication open
38. Stressing services to children to reduce feelings of "turfdom"

39. Placing parents on decision-making committees
40. Joint curriculum planning
41. Using volunteers
42. Developing coordination models
43. Making case studies of projects with effective coordination components
44. Supporting of scientific inquiry into the educational process and dissemination process
45. Conducting interdisciplinary research efforts into the nature of teaching across cultures
46. Funding planning grants for research in coordinating efforts
47. Publication and distribution of guidelines by Federal Program Agencies
48. Conducting agency-wide searches for coordinating elements
49. Writing research papers on coordination efforts
50. Establishing Remedial Basic Skills Programs under Title IV, Part A for low achieving Indian Students who cannot be reached through Title I

Taken from Success Through Coordination A Hands-On Guide to the Coordination of Basic Skills Efforts, U.S. Department of Education Basic Skills Improvement Program.

Figure 2

Coordination Procedures and Corresponding Coordination Elements

COORDINATION PROCEDURES*	CORRESPONDING COORDINATION ELEMENTS**
1. Joint Planning	1,2,8,10,12,14,15,18,23,28,30,32,33,35,37,39,49,50
2. Joint Assessment of Needs and Resources	1,3,4,8,12,24,27,33,39,46,50
3. Use of Policy-Making Boards	6,7,21,22,37,38
4. Joint Operations	11,12,14,15,18,19,20,23,24,27,28,31,37,40,48,50
5. Joint Funding	9,13,18,19,20-25,29,30,31,32,50
6. Information Sharing	8,12,14,15,16,17,18,24,26,28,29,36,37,40,41,42,43,44,45,47,48,49
7. Implementation of Legislation and Regulations	5,9,19,20,23,34,47

*It is recommended that these procedures be referred to in the establishment of a coordination model.

**The Cooresponding Coordination Elements are listed in Figure 1.

Taken from: Success Through Coordination A Hands-On Guide to the Coordination of Basic Skills Efforts, U.S. Department of Education Basic Skills Improvement Program.

A Step-By-Step Coordination Model For SEA's and LEA's

1. Establish Coordination as Board of Education Policy

Rationale

In order for coordination to become an integral part of a district's program, it is essential that a policy for coordinating all basic skills-related activities be established both as firm and formal policy by the district's Board of Education. The board's resolution establishing a coordination policy should include a general statement indicating that it is the policy of the board that all the district's basic skills programs are coordinated through the regular administrative channels in the districts. The resolution should be presented by the district's superintendent with the appropriate rationale. The board, in turn, should require regular reports, however brief, which would summarize activities which have been coordinated indicating the benefits, as well as problems, resulting from these activities.

The board policy should be followed by a series of administrative activities to implement the policy.

Management Plan

Activity 1: Prepare board resolution.
Person Responsible: Superintendent

In support of the resolution to the board, cite several examples of how coordination can either save the district funds or improve the quality of education in the district. For example, show that:

- in-service is a component of both the ESEA I and the district's regular language arts programs
- by each program specifying its in-service needs, it would be possible to engage one consultant who would address each of the program's needs rather than hiring two separate consultants on two different occasions for each of the programs—resulting in a cost saving
- there is much to be gained by the regular program teachers and ESEA I teachers meeting together to coordinate their teaching activities.

Activity 2: Place resolution on board agenda; present to board.
Person Responsible: Superintendent

This type of resolution is generally non-controversial. The superintendent should be prepared with specific examples to generate enthusiastic board support. It may be advisable for other administrative staff members to be present when the resolution is presented. First hand testimony by a staff member would, on occasion, strengthen the board's support.

Activity 3: Report board's resolution to staff for discussion.
Person Responsible: Superintendent

This report should be presented by the superintendent in a resolute manner to impress upon the staff that coordination is now a board policy that will be incorporated into the district's educational program. A general discussion should follow during which staff members indicate areas in which coordination is needed, is practical, and who might participate. Minutes of the discussion should be circulated following the discussion since the ideas presented during the discussion might well serve as the basis for future action.

Activity 4: Report to board regularly on coordination activities.
Person Responsible: Superintendent

It is recommended that during the first year, at least, coordination-related activities should be regularly reported. Specific incidents and cost savings should be emphasized. Credit should be given to individual staff members in these reports. Boards are generally skeptical about reports which paint a glowing picture of progress unsupported by specifics.

Notes:

2. Establish Coordination as the Superintendent's Policy

Rationale

The superintendent, as the chief school executive, is responsible for administering all board policies. The promise of coordination of basic skills is improved administration and instruction at a reduced cost. Thus, this coordination should assume a position of high priority among the superintendent's responsibilities.

Responsibility suggests "doing", rather than merely establishing a policy of coordination. Yet, on the one hand, the nature of coordination cannot be readily legislated or mandated. Fundamentally, it involves creating a climate of trust and cooperation which should permeate a staff's working relationships. Nevertheless, it is essential that administrative procedures be established which can be monitored and assure that progress is made toward the goal of effectively coordinating like activities in basic skills.

Unless the superintendent demonstrates his commitment to coordination it will be dismissed by his staff as just another desirable goal which will have to wait until the collective administration "gets around to it."

As an established board policy, the superintendent is well advised to "get to it".

Management Plan

Activity 1: Report board's resolution to administrative staff.
Person Responsible: Superintendent

The special meeting should be convened to present the board's resolution. If this is impractical, adequate time should be scheduled during a regular meeting to enable the staff to explore fully the resolutions and ideas for their implementation at the district level. At this meeting, in order to avoid hasty, poorly planned activities no formal action should be taken. Rather the first meeting should serve to announce the board's policy and then to brainstorm its local applications. The superintendent should indicate that he has placed coordination of board policy among his priorities. He will:

- Announce the board policy
- Discuss: the subject areas/levels to be coordinated
- Appoint interim chairperson and committee to study problem
- Set dates for (a) completing report, (b) next meeting to discuss report

Activity 2: Submit report to superintendent; convene meeting of committee and superintendent.
Person Responsible: Committee chairperson

The report should be completed within a reasonable period of time; i.e., three to four weeks. The chairperson should also prepare a summary of the report indicating (1) priority areas, (2) recommended participants, (3) in-service needs, and (4) budget. It should be submitted to the superintendent for review.

Following a careful review of the report, the superintendent should meet with the reporting committee to review the report and the superintendent's "final" policy and program. This meeting should be held no later than two weeks after the report is received.

Activity 3: Convene administrative meeting to develop the coordination program.
Person Responsible: Superintendent

This meeting should be, if at all possible, devoted in its entirety to the report and the superintendent's plan. This investment of staff time would be convincing evidence that both the board and the superintendent are serious about establishing coordination as an administrative procedure.

The superintendent should chair this meeting. He should call upon the committee chairperson to report on the highlights of his findings. It is recommended that a summary of the report be distributed to the staff.

Discussion should be limited since the superintendent already has formulated his plan based on the report.

The superintendent then presents his plan as to subjects, levels, participants, timeline, and budget. This presentation should be followed by an extensive discussion by the staff to refine the plan, explore problem areas, review the participants, and prepare a budget and timeline. The superintendent then indicates how his original plan is to be modified to reflect the reactions of the administrative staff.

Activity 4: Compile superintendent's report and distribute to staff.
Person Responsible: Superintendent

The superintendent, assisted by the appointed committee, reviews the staff's reactions and recommendations. He then writes the report which will delineate the plan for coordination for a period of one school year. As a practical matter, the superintendent would delegate the detailed writing to a staff member who is skilled as a writer and who has participated in the meetings to date. However, the draft should be reviewed by the superintendent prior to the final writing.

It is recommended that these sections be included in the report:

- Board resolution
- Rationale
- Subject areas and levels to be coordinated
- Types of activities to be coordinated
- Names and positions of staff who will participate
- Expected benefits resulting from the proposed coordination activities
- A budget for coordination activities, e.g., meetings, secretarial, travel, etc.

The report is distributed to the board members. All administrators should receive a copy. A loose-leaf binder is desirable to facilitate changing any aspect of the blueprint, e.g., participants, timeline, and budget. This blueprint should serve as a permanent statement of the district's coordination commitment provided it is regularly revised to reflect changing circumstances.

Notes:

3. Organize the Staff for Coordination of Basic Skills Programs

Rationale

Initiating the coordination of activities as an explicit policy with a follow-up plan is fraught with pitfalls. A climate for meaningful cooperation will require:

- a change in how the staff perceives each other—"friend or foe"
- the relaxation of "turf protection"
- setting limited and realistic goals
- selecting an area that requires improved coordination
- identifying a series of successes
- creating an environment in which coordination will become an administrative way of life.

Here are important guidelines for staff organization:

- Use volunteers with appropriate experiences to serve on the committee.
- Budget adequate time for planning.
- Offer recognition for modest efforts.
- Avoid appointing a committee that will become another standing committee.
- Change the composition of the committee as needed to reflect changing goals, success or failure of members to achieve the mandate, and changes in subjects/levels.
- Secure a representative committee which includes central administration, building level administration, subject area specialists, teaching staff, and pupil personnel services. Frequently, it is important to secure the cooperation of the teacher's and administrator's bargaining groups to facilitate scheduling of meetings after regular school hours.
- Select individuals judged as able to suspend parochial considerations in order to serve the largest number of students and staff.

Serving on the coordination committee should be viewed by the district's staff as a privilege. At this point, the board has established coordination as its policy. The superintendent has translated this policy into an operational, administrative policy for the staff. The "final" report, together with the budget, discussed in Step 2, should provide convincing evidence that coordination is a high priority for the district. Serving on this committee should result in meaningful change.

Management Plan

Activity 1: Organize the coordination committee.
Person Responsible: Interim chairperson

A special meeting devoted to selecting the committee and establishing its operational procedures should be convened. It is recommended that the superintendent chair this meeting. The "final" report, discussed in Step 2, should serve as the basis for establishing committee membership criteria, operational procedures, and a recommended timeline for key activities.

After these matters are established, the superintendent should consider delegating the detailed implementation of the plans to the interim chairperson but should be available for key decisions, review critical reports, and maintain a "presence" throughout the coordination effort. It is essential that the staff assume responsibility for the details.

Activity 2: Circulate invitations to all staff to serve on committee.
Person Responsible: Interim chairperson

These items should be included in the invitation materials:

1. Background—Brief history of the coordination activities to date
2. The committee—Its purposes, composition, responsibilities, overall budget, and timeline

3. Application form—In addition to the standard biographical information, it should include past experiences in serving on committees whose responsibilities would qualify the applicant for a coordination committee. A deadline should be established for the return of the applications.

Activity 3: Select the coordination committee.
Person Responsible: Central Administration

The applications are organized according to the groups to be represented, i.e., administration, subject specialists, teachers, principals,.....Each application is then reviewed to determine who among each group best meets the requirements for serving on the committee. A weighting factor might be applied to reflect the relative importance of different characteristics.

It is advisable to select alternates for each place on the committee to facilitate organizing the committee without delay should the first candidate decline to serve.

The successful candidates should be informed promptly that they have been selected. Each selected member should confirm acceptance in writing.

Activity 4: Inform board and staff of committee's selection.
Person Responsible: Superintendent

The superintendent should immediately inform the school's board that the committee has been selected and include the name and professional position of each member. Also inform all staff members about the committee's selection.

It is also recommended that the superintendent send a congratulatory note to each successful candidate. If feasible, extend the congratulations in person.

Activity 5: Convene the first meeting.
Person Responsible: Interim chairperson

The coordination committee is invited to the organizing meeting by the interim chairperson who conducts the committee's business until the committee selects its chairperson and officer. A recommended minimum slate includes a chairperson, vice-chairperson, secretary, and a fiscal officer. Standard parliamentary procedures are recommended. At the conclusion of the voting, the newly elected chairperson assumes the position of committee leader and conducts the remainder.

The remainder of the meeting should be devoted to establishing basic operational procedures including these items: (1) rules for conducting the committee's business, (2) place for meeting, (3) days, time and frequency of meetings, (4) fiscal matters, and (5) any other organizational matters.

Notes:

4. Specify Coordination Activities

Rationale

Too often, firmly stated board policies are not translated into reality due to the absence of a set of carefully orchestrated activities directed at implementation of these policies. Purposeful action requires a plan, a framework, and procedures for management.

After the organization of the committee, planning and implementation should proceed without delay and without having to clear each activity with the central administration. Delays, frequent requests for approval, or other expressions of hesitation serve to undermine the authority of the committee.

Following the establishment of operating procedures the committee should:

- Specify activities to be executed.
- Designate those to be involved.
- Set up timelines.
- Determine approximate costs.

Management Plan

Activity 1: Develop an inventory of the basic skills program elements.
Person Responsible: Coordination committee members and a representative from the basic skills staff

Collect only essential statistical and descriptive information about the programs selected. The categories are essentially those included on ESEA, Title I applications—numbers of students served by grade, staff, buildings, funding sources, a brief overview,.....Additionally, the inventory should elicit from those responsible for the program its successful elements, areas requiring improvement, past and/or current coordination activities, and any other data relating to its strengthening through coordination. Collect only information that would be useful in planning a coordination effort since irrelevant or numerous questions discourage respondents and undermine the quality of the data that is supplied. The information should be culled to supply answers to such questions as:

- Do there appear to be current coordination efforts?
- What are some obstacles to coordination?
- Which staff members could be called upon to implement a coordination program?
- What specific need could be satisfied through a coordination activity?

Activity 2: Prepare a preliminary report recommending a coordination plan.
Person Responsible: Coordination committee

Analyze the data collected. Define the problem areas and the recommended coordination activities. It is useful to state clearly in what ways coordination holds a promise for resolving the problems identified.

NOTE: Refer to "Coordination Procedures" and the corresponding "Elements of Coordination" described in the Appendix as the framework for the recommendations.

Activity 3: Confer with central office administration.
Person Responsible: Committee chairperson

The chairperson should meet with the superintendent (or with a designee) to assure that the planned activities do not conflict with other administrative activities. As noted in the "Rationale", the committee is to be vested with the authority to act; nevertheless, it is essential that schedules, personnel, and use of resources are coordinated to avoid embarrassments resulting from such conflicts as use of media and meeting rooms and scheduling staff members for more than one meeting on a given day.

Activity 4: Convene a meeting with representatives of the coordination committee and program staffs.
Person Responsible: Committee chairperson, appropriate administration staff member

Within the limitations of the budget, a one-half day meeting with the coordination committee and program staff representatives should be convened to review the recommendations in Activity 2 of this section. Reactions should be limited to identifying solutions that are patently impractical or those which would interfere with current practices. The meeting should avoid reworking the solutions already reviewed and approved by the coordination committee. The meeting should achieve the development of a coordination plan which includes these categories:

- the participants
- the program elements to be coordinated
- recommended coordination procedures
- budget for each of the activities for which there will be an expenditure.

Activity 5: Establish a set of operating principles for all coordination activities.
Persons Responsible: Coordination committee

Fundamental to the success of the committee is agreement on a set of operating principles. Seven principles have been identified as common to successful coordination projects and are noted in the listing of Coordination Procedures in the Appendix. Some specify an activity while others suggest creating a "climate of sharing", a willingness to work together toward a common good. The principles overlap, yet, it is helpful to focus on each one to highlight its characteristics.

1. JOINT PLANNING—Whenever feasible, representatives of a common program with different funding sources should jointly plan their program to discover common areas of activity. Inevitably, programs should have common needs in one or more of the following: in-service, consultants, materials, equipment, and evaluation. A common activity should result in sharing and the resultant cost saving.

2. JOINT ASSESSMENT OF NEEDS AND RESOURCES—Needs and resources can be considered as "two sides of the same coin." A need can be satisfied if an appropriate resource is available to meet the need. A student who requires additional reading instruction to achieve grade level has a need which can be satisfied by the availability of a qualified tutor, which is the resource. Thus, joint assessment of needs and seeking the resources to satisfy these needs should result in identifying common needs and shared resources.

3. USE OF POLICY MAKING BOARDS—School governance is based on the decisions and policies of a variety of boards or councils. Foremost, is the school board which is the legal entity that operates a district. Other boards which, in varying degrees, influence the operation of a school include parent advisory councils (PAC's), community action groups, bargaining agencies for administrators and teachers, parent/teacher councils, and accrediting organizations.

   Frequently, establishing a new program, or modifying an existing one, requires the review and approval of one or more of these boards. Joint appearances by representatives of two programs, both of whom have agreed to their positions prior to the appearance, is impressive and improves the chances for affirmative action. The program representatives should plan presentations, resolving their differences and agreeing to a common set of requests. Harmony and cooperation frequently are rewarded with additional resources. These programs will be perceived as "good risks".

4. JOINT OPERATIONS—Examples abound in the savings and improved results to two jointly operated

programs. Consider the sharing of a mathematics resource room equipped with furniture and materials for independent and small group study. The initial costs for outfitting the facility are high. If used only by the remedial teachers, the room often would remain vacant because of scheduling considerations or because of lack of demand. Inviting the regular teachers to use the space for enrichment or independent study, within the federal guidelines, would increase the use of this facility with minor increases in costs for additional instructional materials.

Furthermore, there are obvious educational benefits in the association of students of varying abilities and achievement levels. This might generate a new resource—peer tutor at no additional cost.

5. JOINT FUNDING—This principle is self-evident. It serves to reduce the cost of a service or material to a user while expanding the benefits of the item purchased. The costs for expensive equipment, e.g., micro-computers, television systems, frequently exceed available funds. They become reasonable purchases when two or more programs agree to joint funding and to accommodate each other's requirements for use.

   Similarly, jointly funding the services of an outstanding consultant, visitations to exemplary programs, and attendance at selected professional conferences will enhance the quality of a program at a reduced cost to each of the beneficiaries.

6. INFORMATION SHARING—Information sharing cannot be mandated—it is the direct outgrowth of a "climate of sharing". A staff of administrators and teachers which trusts one another will readily share ideas and offer assistance in improving the district's educational program.

   This principle is the foundation upon which to build coordination. One can adhere to the other principles and the program will falter in the day-to-day implementation.

   It is critical that the district's leadership—superintendent, principals, chairpersons of various committees—routinely share articles, memos, and reports of common interest. Briefings after attending conferences are another example of information sharing.

   Sharing information, both formally and informally, is the single most important element in creating an environment in which coordination will flourish.

7. IMPLEMENTATION OF LEGISLATION AND REGULATIONS—The principle refers to the Title II Basic Skills legislation and coordinating sections of the Educational Division General Administration Regulations (EDGAR).

   As SEA's and LEA's develop legislation and regulations a thorough study should be made of them and correlations with coordination efforts should be identified.

Notes:

5. Develop and Implement a Management Plan

Rationale

Coordination involves a complex mix of people, activities, time schedules, and budgets. Unless these are organized into a management plan, the program will falter. Think of a management plan as a program blueprint with each step stated as an activity to be recorded. When the management plan is completed, the board's/superintendent's policies will be accomplished.

Characteristics that mark an effective management plan include:

- simplicity in structure
- strategies for identifying problems
- strategies for modification to reflect new development
- provisions for replacement of committee members
- orientation activities for new members
- strategies for monitoring

An important consideration in monitoring is the selection of a qualified person—one who has frequent contacts with the committee chairperson. It is recommended that the person selected be a member of the central office staff.

Management Plan

Activity 1: List major coordination activities and place them in chronological order.

Persons Responsible: Committee Chairperson and selected members

Review the program developed in Step Four and list the major activities required for implementation.

Activity 2: Specify the sub-activities
Person Responsible: Committee Chairperson and selected members

Upon agreement on the major activities, identify and list the sub-activities necessary. Decide upon the best strategies, the individuals best suited to do the task, and a target date for completion.

This coding format is simple, yet effective:

List of Major Activities

1____
2____
3____

ACTIVITY	PERSON/AGENCY	TARGET DATES
1.		
1.1		
1.2		
1.3		
2.		
2.1		
2.2		
2.3		
3.		
3.1		
3.2		
3.3		

Activity 3: Review plan and develop final management plan.
Persons Responsible: Coordination Committee

The entire coordination committee should be afforded the opportunity to review the plan and react. This is an opportunity to become familiar with the plan, to identify potential implementation problems, and to learn about individual responsibilities.

Activity 4: Establish and implement a monitoring process.
Person Responsible: Committee Chairperson

This activity is perhaps the most critical in the success or failure of the management plan. In a sense, it can be described as "managing the management plan." The chairperson should be given the authority to select a competent member of the clerical staff, preferably one who is located at the central administration building. The budget should provide for additional compensation to assure that the plan is regularly reviewed and that files are adequately maintained.

Procedures should also be established for reporting tasks completed and problems encountered. Use memos to inform the program monitor when tasks are completed. Telephone messages should be used only as a last resort.

Activity 5: Prepare progress reports, modifications and revisions.
Person Responsible: Committee chairperson

Periodic progress reports are a necessity. These should be brief, but should address all the major areas in the management plan. The recipients should include:

- the superintendent
- committee members
- staff members designated by the superintendent

Modifications to the management plan are inevitable. Changes in sequencing activities or in any other details should be dealt with informally through the chairperson. Occasionally major changes may develop—the budget may be increased or decreased; staff members or committee members may resign. The superintendent should be informed so that necessary actions can be taken to avoid the loss of time, effort, and morale. Prompt action in revising the management plan would convince the staff that the coordination program still has high priority and will not be abandoned.

Notes:

6. Establish Conflict Resolution Procedures

Rationale

Coordination activities will cross institutional boundaries—subject, organizational, and administrative. Departures from established procedures usually generate conflicts which would undermine the implementation of the program.

Sources of conflict which may be anticipated and must be dealt with are:

- personality clashes
- ego slights
- legitimate concern for the integrity of the program

A set of procedures or mechanisms for conflict resolution should be incorporated in the organization of the coordination committee.

Management Plan

Activity 1: Formalize the committee's authority.
Person Responsible: Superintendent

The superintendent should state the committee's range of authority—stating explicitly the decisions it can and cannot make without prior administrative approval.

For example, it should be authorized to schedule meetings, inform administrators of the need for substitutes, and institute record-keeping procedures. On the other hand, authority may be limited in selecting instructional personnel and materials. To the degree that authority is clearly delineated, problems will be decreased.

Activity 2: Develop informal communication channels.
Person Responsible: Coordination Committee

A number of simple, yet effective, practices can be instituted to create a climate of trust and candor:

- ANNOUNCE MEETINGS—Inform key administrative personnel of the committee's meetings. Invite non-committee staff to attend.
- CIRCULATE MINUTES OF MEETINGS—Key decisions and plans should be recorded and distributed to the administration. Premature disclosure of sensitive issues might be omitted until these are decided upon.
- MAKE INFORMAL CONTACTS—Committee members should be alert to opportunities to share ideas and to clarify misunderstandings through day-to-day contacts with the program staff. Occasionally, a luncheon with a disenchanted program person could avoid problems.

Activity 3: Resolve conflicts in program elements.
Person Responsible: Committee chairperson

Establish a conciliation panel which includes representatives of the administration, teaching staff, counselors, or other groups that could relate to specific problems. In small districts, it may be necessary to request a neighboring district to participate on a quid pro quo basis.

This procedure may be used for conflict resolution:

- Have each party summarize the position taken.
- Follow this with a personal presentation.
- Question the presenters to determine the merit of positions taken.
- Attempt to compromise, if feasible.
- Make a decision.
- Provide an explanation for making the decision. This can reduce the appearance of favoritism.

Activity 4: Resolve "turf" problems, ego slights, and personality conflicts.
Person Responsible: Superintendent

If the implementation procedures presented here are adopted, problems in this area can be minimized. However, resolving these problems is not a function of the coordination effort. Standard administrative/supervisory procedures should be applied when personality type conflicts interfere with the effective implementation of plans and activities.

Notes:

7. Develop Evaluation Procedures

Rationale

Evaluation involves many tasks associated with assisting a staff to initiate and conduct a program efficiently. Monitoring is conducted to assure that basic objectives are being accomplished. Information is collected and disseminated to persons who should institute changes when necessary. Evaluation may result in revisions in activities, organization, materials, and budget.

Management Plan

Activity 1: Identify all program elements and associated costs.
Person Responsible: Coordination Committee

For each of the budget line items enter the budgeted amounts as if each program were to be conducted independently. This data will provide a frame of reference for any cost savings resulting from program coordination.

Activity 2: Tabulate program activities' budget.
Person Responsible: Coordination Committee

As the program elements are conducted as part of a coordination effort, tabulate the cost for each. The ability to translate the coordination effort into an actual savings is the single most important argument for the coordination of basic skills programs. A sample format appears on this page.

Activity 3: Refer to the Assessment and Planning Flow Chart in this section of the handbook.

Activity 4: Consult these references for additional information:

BUDGET WORKSHEET—COORDINATION SAVINGS

ITEMS			FEDERAL PROGRAM	REGULAR PROGRAM	TOTAL FED/REG.	COOR—DINATED PROGRAM	SAVINGS
ADMINISTRATION							
0151	Auditor Fee	100.00					
0159	State Evaluation	525.00					
0159	Dissemination	400.00					
	TOTAL	0100	1025.00	2050	3075	2500	575
INSTRUCTION							
0212	Project Supervisor (Half-time)		7500.00	10,000	17,500	14,000	3,500
0213	Teacher Salaries (40 @ $7 for 50 hours)		14000.00	...	...	...	...
0219	Sect. Salaries (Half time)		2500.00				
0222	Teaching Supplies		1000.00				
0224	A-V Materials		500.00				
0239	Travel						
	(100 mi. ● 12¢-Supervision)		120.00				
	(1000 mi. ● 12¢-Conferences)		120.00				
0250	Contracted Instruction- (Consultant) (2 ● $150/day for 5 days)		1500.00				
	TOTAL	0200	27240.00				

The Evaluator's Handbook, Lynn Morris and C.J. Fritz-Gibhan, Beverly Hills, Ca.: Sage Publications, 1978.

Standards: A Way of Measuring Success, U.S. Department of Health, Education, and Welfare—Office of Education Basic Skills Improvement Program, Washington, D.C., August 1979.

Notes:

8. Develop a Set of Do's and Dont's

These statements are intended to serve as a summary of the steps to the implementation of coordination efforts. Refer to them frequently and use them in conjunction with the Summary Roster, Activity Planning Chart, and the Flow Chart for Program Assessment and Planning—all of which are provided in this section on Implementation Procedures.

DO	DON'T
1. Select a broadly representative committee with divergent points of view.	1. Select committee members who are considered cooperative by the administration.
2. Provide the committee with an adequate budget.	2. Request that the committee volunteer time for meetings.
3. Establish in advance a set of guidelines defining the committee's role and authority.	3. Allow the committee to operate without guidelines and solve problems as they arise.
4. Have administration specify programs to be coordinated and desired end goals.	4. Allow the committee to select the programs and what it desires as an end product.
5. Circulate periodic progress reports to all appropriate staff members.	5. Meet privately and avoid unnecessary contacts with non-committee members.
6. Develop a timeline for important activities which may be adjusted should events warrant.	6. Set rigid dates for important activities. Show displeasure when these dates are not met.
7. Gradually integrate the coordination into the administrative framework.	7. Disband committee when its functions are completed. Re-organize when other programs are to be coordinated.
8. Evaluate value of coordination by actual savings.	8. Allow committee to function with no formal evaluation procedure.

Notes:

A Summary Roster

In planning coordination with other programs/projects consider:

- geographic proximity
- mutual needs and interests

After this has been done, identify areas in which coordination is in operation in some measure, or areas in which coordination can begin. Project directors suggest that you begin "small"—maybe—in just one or two areas.

1. Identify the programs/projects operating in proximity to yours. (If you need assistance in identifying the programs/projects, contact the Office of Federal Programs in your School District.) Place them in the indicated boxes.
2. In the upper half of the boxes place the numbers of the Coordination Elements from List One which identify elements of coordination **already in progress**. (See Appendix.)
3. In the lower half of the boxes, place the numbers of the Coordination Elements which you **would like to implement**.

Example:

1. PROGRAMS/ PROJECTS	A TITLE I	B BILINGUAL PROGRAM	C SPECIAL EDUCATION	D TITLE II BASIC SKILLS	E ADULT EDUCATION	F TEACHER CORPS
2. In Progress	16	4	16		17	
3. To Be Implemented			6	25		

Complete this Summary Roster for your project:

1. PROGRAMS/ PROJECTS	A	B	C	D	E	F
2. In Progress						
3. To Be Implemented						

An Activity Planning Chart

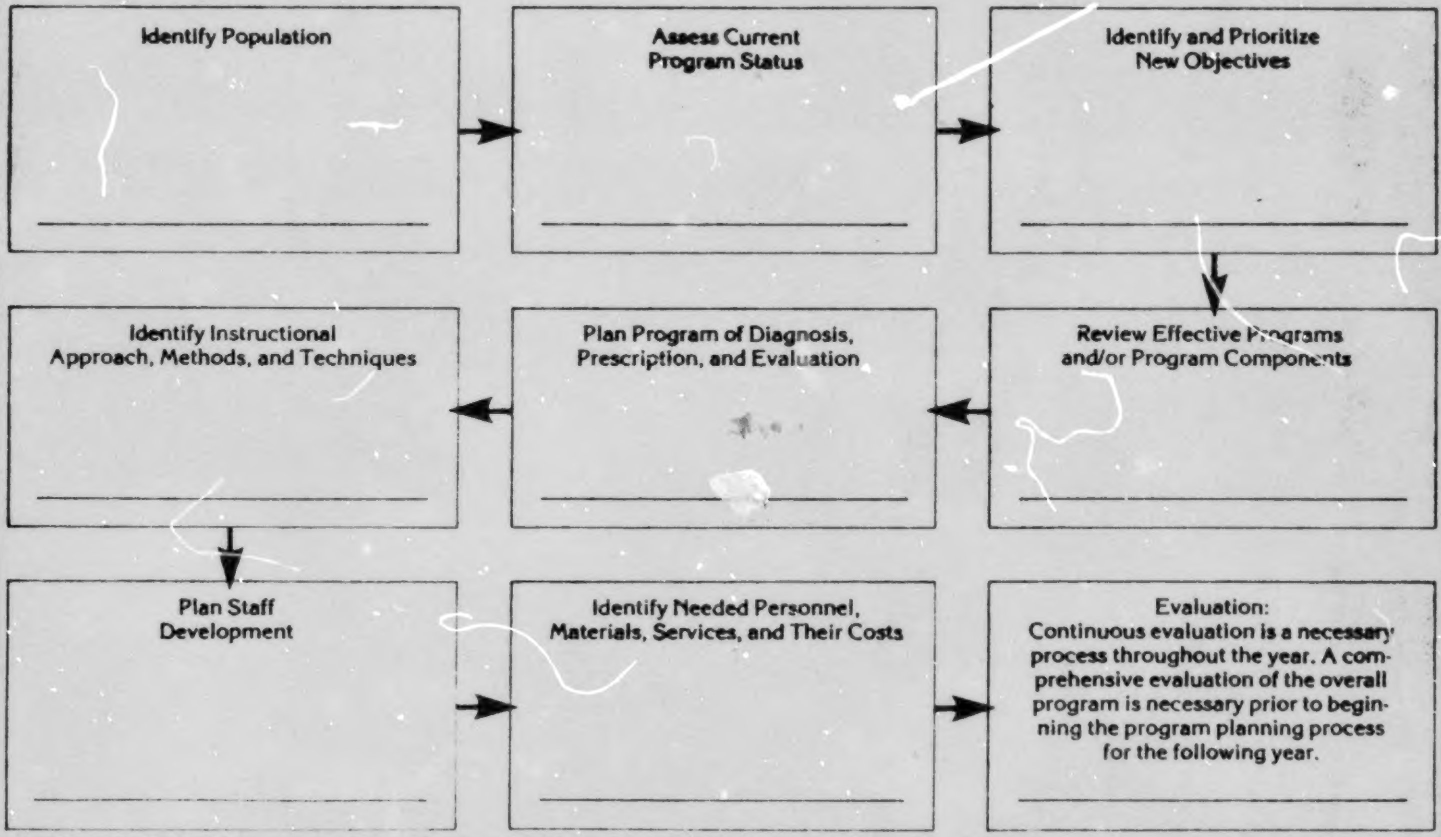
Use this chart to list some specific activities to help you get started.

COORDINATION PROCEDURES	ACTIVITIES	PROGRAM/PROJECT
1. Joint Planning	Example: Make a phone call to director to plan meeting date.	Example: Head Start at Happy Valley School
2. Joint Assessment of Needs and Resources		
3. Use of Policy Making Boards		
4. Joint Operations		
5. Joint Funding		
6. Information Sharing		
7. Implementation of Legislation and Regulations		

Assessment and Planning Flow Chart

The United States Department of Health, Education, and Welfare, Office of Education devised this Flow Chart which may be used for total program assessment and planning. In order to use this chart:

1. Refer to the completed Summary Roster which identifies the programs/projects with which you coordinate or plan to coordinate.
2. Write the identifying letters of these programs/projects in the boxes of areas of assessment and planning in which you feel coordination could take place.


Identify Population
Assess Current Program Status
Identify and Prioritize New Objectives
Review Effective Programs and/or Program Components
Plan Program of Diagnosis, Prescription, and Evaluation
Identify Instructional Approach, Methods, and Techniques
Plan Staff Development
Identify Needed Personnel, Materials, Services, and Their Costs
Evaluation:

Continuous evaluation is a necessary process throughout the year. A comprehensive evaluation of the overall program is necessary prior to beginning the program planning process for the following year.

•Chart from "Right to Read Assessment and Planning Handbook", U.S. Department of Health, Education, & Welfare, Office of Education.

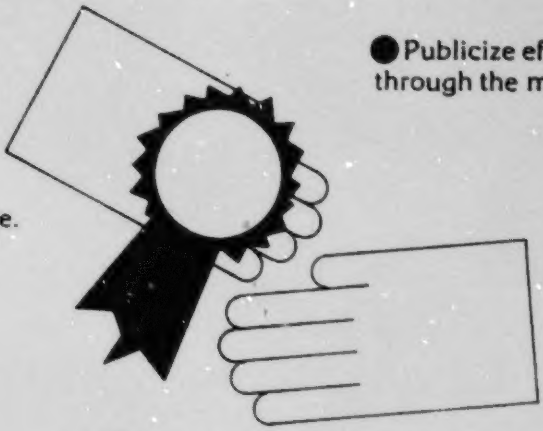
Tips To Assure Success

- Involve leaders of successful groups.

- Plan continuous assessment progress and problems.

- Share leadership roles to discourage, "turfdom".

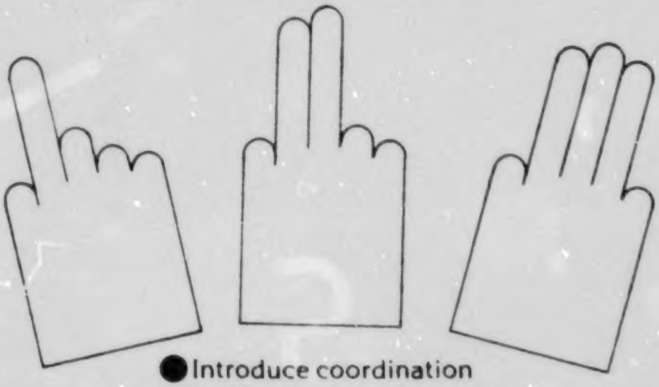
- Publicize effort through the medi



- Motivate involvement by establishing common goals and identifying common interests.

- Create a positive image.

- Provide incentives and rewards for those involved.



- Don't become discouraged by failures.

- Introduce coordination gradually—one good step at a time.

- Keep the national program office informed, enlist support.

- Make statements of intent very clear.

- Use people with strong problem-solving talents.

- Provide for a consistent flow of information among directors and peers

PROGRAM EVALUATION

Excerpts from Basic Skills Improvement Program--Management/Evaluation Design

Shirley A. Jackson, Director

Basic Skills Improvement Program
U.S. Department of Education
September 1980

Evaluation--The Centerpiece of Demonstrations

Evaluation is a vital tool for any school program. Professional educators and the communities they serve need to know how well their children are learning and what their needs are. They need to know what works and what doesn't, and they need to identify weaknesses and strengths in their educational program so that decisions can be made about them.

For a demonstration, however, evaluation is not only a critical but an essential part of the project. The whole purpose of a demonstration is to determine if a particular strategy, process, method or product is effective in a particular setting.

Evaluation can be difficult and upsetting, particularly when the project's objectives are not clear, when the project director has had no experience with evaluation, and when the school staff is antagonistic to the measurements being proposed. But evaluations can be extremely helpful, particularly in enabling the school to define its educational philosophy more clearly, to clarify its objectives, and to select activities which are the most effective in meeting those objectives. Moreover, evaluations have the potential for persuading the public and others to accept the particular strategy or method being demonstrated.

Much has been written about formative and summative evaluations; the former addresses the process and the latter the outcomes of the project. The fact is, however, that most evaluations combine the two. For a demonstration the combination is essential. Not much can be learned from a demonstration if the evaluation is limited to the outcome (e.g., test scores) without a careful assessment of how the outcome was reached.

The Basic Skills Program does not require a third-party evaluator, which is to say an individual or group from outside the school system. That determination must be made by the project itself. In doing so, it would need to consider such factors as the availability of a properly qualified individual or group, the cost, and the knowledge of the evaluator about the matters being demonstrated. Some school districts and universities have evaluation staffs and have had considerable success in using them in assessing their program. Others have no such resource and very little experience in evaluation. Both might want to consider a third party evaluator, but those with little experience most certainly should if the project hopes to have its results made believable and acceptable.

Other than cost, the biggest issue in determining whether or not to seek out a third evaluator is the question of objectivity. The suspicion might be that a school staff person assigned to evaluate would not be disinterested in the results, while a person from outside the system would. That isn't necessarily so. Consultants often need to continue doing business, and there is the tendency to let the project hear what it wants to hear. But objectivity will be determined by the relationship which the project establishes with the evaluator and with the understandings which develop between them. Any evaluator will be objective if told that objectivity is absolutely essential to the project and if made to believe that the project means it.

There is also the consideration of using a combination of both--hiring within for the process evaluation and from without for the summative evaluation and the analysis of the results. In this way, the project might be purchasing the expertise it needs in the area it most needs it.

Whether an evaluator is selected from inside the system or as a third party evaluator, it is extremely important that the evaluator be intimately involved with the carrying out of the project, particularly in the formation and revision of the objectives, in the selection and monitoring of the activities to meet those objectives, in the selection of instruments to measure success, and in identification of any other means of evaluating the process and the outcomes. The evaluator's usefulness can be pretty much guaged by the extent of his or her understanding and knowledge about the purpose and working of the project.

Some of the crucial early decisions that must be made in an evaluation are determining the appropriateness of the objectives (making careful distinctions between process and outcome objectives and making certain that they are measurable and consistent with the operational plan), deciding if there should be a pre-test, establishing a plan for the post-test, selecting the testing instruments, determining if there should be a control group, selecting data to be collected and the analysis techniques to be used. These decisions should not be made by the evaluator alone. They must be decided upon by the project staff and the evaluator.

As to the tests themselves, we know that these are an essential part of any evaluation plan, particularly in demonstrations of the learning of the basic skills. Most standardized tests are non-referenced, e.g., California Achievement Test, Standard Achievement Test, Metropolitan Achievement Test, Iowa Test of Basic Skills and the Comprehensive Test of Basic Skills. These tests measure achievements of other children who have been tested. Thus the term norm-referenced, as contrasted to criterion-referenced tests which measure achievements by comparing the results to independent standards. Whether or not a project uses norm-referenced tests or criterion-referenced tests is of course up to the project itself. The advantage of the latter is the freedom given to the locality to develop questions for itself which are based on the school program and on the objectives which the program has adopted for its students. This would appear to avoid testing students about matters which they have not been taught and which are not a part, or at least an important part, of the school program. However, one of the difficulties for a demonstration project using criterion referenced tests may be that the education program on which the criterion-referenced testing is based may have too local an orientation and therefore the test results may not have applicability to other regions of the country.

For those using the standardized tests the opposite may be true: the students may be tested on matters which were not taught or were not given emphasis. Each project, therefore, will have to make its own determination as to which kind of test would be most effective for that particular program.

While standardized tests are essential to these demonstrations, the evaluation plan should not be limited to them. There are other measurements of success, particularly as to formative or process evaluation. Descriptive evaluation techniques in particular are very useful, as are interviews, observation, staff analyses--each being accompanied by a structured format. Obviously these tend to subjective results, but while such results would not in themselves validate a demonstration, they are extremely helpful to filling out the evaluation of the project.

EVALUATION

Written by Karl Schneider, Director

Right to Read Reading Academy
Eagleville Hospital and Rehabilitation Center
Eagleville, Pennsylvania

Excerpted from: Adult Literacy Program Handbook - A Compilation of Reading Academy Program Experiences

Andres R. Montez, Editor
U.S. Department of Health, Education and Welfare (n.d.)

Use and Interpretation of Data

Essential components of an evaluation are: baseline information (gathered early in the program); change information (gathered as students move through the program, or leave); and follow-up information, gathered after students have been out of the program for a time.*

Follow-up information involves the relation of remedial education to overcome survival skill deficiencies. Such information includes the following:

Job application and/or resume
Social Security card; birth certificate
Filed income tax forms
Completed admission and financial aid forms
Passed driver's license questions or understood mass transit schedules
Recited background data (dates, places of employment) in role-playing situations, and then real interviews
Obtained employment and/or admission to education or training institution

Evaluation is most effective when (a) it is incorporated into a project from the very beginning, rather than imposed on it at the end; (b) it is seen as a feedback and support tool, not simply as criticism; (c) it is used to clarify both administrative and learning processes; and (d) it keeps track from the outset of essential information on each student, permitting both individual student assessment and profiles and discussion of trends in program effectiveness. The following areas are important to consider.

1. Data Collection: Processes

a. Decide early what information is essential and collect it from the beginning; you will not be able to recall it or catch up later.

b. Keep records up-to-date each month, or the amount of detail will become overwhelming.

c. Prepare a preliminary information-collecting form at once; revise it after a few months (1) to incorporate items originally omitted but now clearly needed, and (2) to drop information not needed.

d. If you are using a number of forms, review the need for them at intervals. Often they can be combined to reduce time and costs.

e. At the latest by the end of one year, draft your final information-collection form in a format which can be directly punched onto IBM computer cards (see attached sample); after one year you will probably have more students than you can keep track of efficiently by hand, and as the project continues you will need easy access to increasing amounts of information from early years for comparison. At least provide for this possibility by keeping early information easily accessible.

2. Data Collection: Content

You will need to establish baselines on which to evaluate the competency and progress of your students.

a. Certain items are obviously indispensable.

demographic information—age, sex, race of clients
skill level—reading, writing and other subjects in which students are being tutored.
survival skill abilities—APL (Adult Performance Level) consumer economics, occupational knowledge, health, government and law, community resources
grade level—formal grade level of the student (as opposed to his true skill level)

If you have a bilingual population you will need to determine level of English proficiency; reading levels in English and the native language; any information which is specific to the students in your program area; dates on which student enters and leaves the program; attendance records on each student.

b. General Data:

The number of students enrolled initially; the number of students completing an instructional module, (defined by a stated length of time); the number of students completing instructional units, (i.e. 60 hours); the reasons for dropouts; the number of students who continued their education elsewhere, include on-the-job training; student, teacher and volunteer responses; the most commonly used materials; record Entry Reading Level; informal diagnostic reading scale;

c. Information needed to clarify any processes you have specified as contributing to change in students as a result of your program (e.g., if you have specified a change in the student's self-image as a result of improved literacy skills, you will need to test his self-image early and late in the program).

d. Information needed to follow up on the students after they leave the program (home address, job address, and note of any other program to which the student is referred).

e. If your program is a part of a larger program, you will need the basic data outlined in 1 (a), (b), and (c) for persons who do not participate in your program. This will give you a basis of comparison (a) to

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*Readers interested in a more sophisticated discussion of the essentials of evaluation are referred to *Application of Methods of Evaluation*, by Hyman, H.H., Charles R. Wright, and Terence K. Hopkins, Berkeley, University of California Press, 1962 help describe your students, and (b) to describe selection processes which may be biasing entry from the host program into your program. If you do not have such a comparison group, you might consider comparing your results with those of similar programs in your area.

3. Tailoring the Evaluation to Your Program

a. Each program is different. Consider how the special characteristics of your program may affect such areas as:

- length of time students are available to the program;
- special population characteristics or attitudes that will affect your results (e.g. an older student population may have less chance of employment after improving their literacy skills, than a younger group)
- the goals of your students—is the GED a common goal, a realistic one, a necessary one, or what do you suggest as an appropriate standard of achievement by which you will measure the "successes" and "failures" of your program?
- what are the abilities and limitations of your personnel?

Accentuate the possible when shaping your program, don't set impossible goals. Evaluation consists of showing where your results fall on a line between the realistic maximum and minimum which can be expected from your program.

b. Is your student population homogeneous, or can you expect more from one subgroup than from another? Identify recognizable subgroups early; if your goals for them are different, perhaps your work with them needs to be different.

c. Consider a student self-survey or a teacher self-survey administered periodically to ascertain what is helpful and not helpful, what changes they would like to see, what are the areas of strength and weakness.

4. Change and Follow-Up Information

Change information needs to be related directly to the information you have collected as baseline. If you have used one standardized test of reading level on entry to the program, try to avoid using another test for comparison purposes. Use a test which has a different form of the initial test. The same applies to measures of each skill you have proposed to change.

The amount of change you find needs to be related to the investment that the student has made in the program (and that you have made in the student). This means that the length of time the student has been in the program, and his attendance pattern, should be related to his changes.

Follow-up information needs to be directly descriptive of the ultimate change you have set out to make in the student's life. That is, if you have set out to make the student fit for a job, or for a better job, you need to document whether or not he got and kept that job after leaving your program.

5. Feedback between Program and Evaluation

Evaluation is not a threat to your program, nor is it an afterthought. It is a tool available to you throughtout the life of your program; it will help show you what progress you are making towards your goals, how to clarify them and modify them if need be, and may identify the processes by which you are reaching, or failing to reach, those goals before too much of the year has gone by.

It is to your advantage to keep the evaluation closely tied in with the practical work of the program. Have your evaluator attend staff meetings, volunteer training, and Community Task Force meetings whenever possible. Statements are made and goals are set in these meetings which may reveal new directions being taken, or assumptions being made which need to be questioned in relation to their likely consequences. It is far better for the evaluator to raise such issues on the spot, and to have this information available at once, than to wait until later when their implementation will have created longer-term consequences.

Conversely, your evaluator will be more realistic and his work more flexible and appropriate to the developing needs of your program, if he receives constant information and feedback from other staff.

Student/Subjective Goal Attainment

Students and the volunteer tutor/teacher have discussed the interest and needs of the student and have evolved a prescription plan.

Such a prescription plan includes the following steps:

1. List the needed skills in sequential order.
2. Relate the needed skills to the student goal.
3. Indicate materials to be used for instruction; supplemental materials or those for program change.
4. Review assigned tasks with the students.

It is helpful if the student is guided to set limited goals. This is important to build in the success of achievement in order to facilitate the move to more difficult goals.

Individual levels and interests vary. The initially stated goal, i.e. "to get a GED" is for the basic reader too distant a goal. Reading the daily paper or traffic signs or a driver's manual may be more realistic and within reach.

After the prescription education plan is discussed with and accepted by the student, the instructional phase begins:

When the prescription plan areas are completed a program posttest is administered and the results are reviewed. As the student completes an area successfully he/she is ready for another area.

Student/subjective evaluation is facilitated by a checklist or an informal list of skill tasks which have evolved from the early prescription diagnosis.

Aspects of the Student/Subjective Evaluation

1. Students will be asked to evaluate what is helpful and not helpful, attendance, development toward good study habits, feelings of confidence about ability to learn, ability to express self verbally, improves after reading self-feeling of confidence. Sharing the learning experience with others—are all factors which might be included in a checklist. A scale or range from 1-5 may record responses.
2. Students may be asked to indicate what changes they would like to see in their program.
3. Students may indicate their strengths or areas of mastery along with areas needing improvement. This material may be termed a survey of students subjective performance indicator.
4. Students may check off completion of skill tasks: ability to complete job application, ability to read instructions, ability to write a paragraph, ability to use the dictionary, and mastery of sight words on Dolch Basic Word List.

It may also be desirable if the volunteer tutor/teacher would also complete a teacher self-evaluation periodically, to see what is helpful and not helpful and what changes they would like to see. (See section on Forms)

Attainment of Program Goals and Objectives

In measuring the attainment of program goals, refer to the project objectives. Express the project objectives in measurable terms.

1. Establishing Program Goals in Objective Terms

Though it is difficult to express the objectives in the affective area, seek to express the objectives clearly. The project objectives should clearly express *what* is to be accomplished, *for whom, when* (time frame) and *how* the accomplishment is to be measured.

Some examples are given below:

> "Thirty percent of the participants will have gained two grade levels upon the completion of six months of instruction, as determined by standardized tests."
>
> "Seventy-five percent of the participants recruited by the program will complete six months of reading instruction during the project period, as recorded by the tutor."
>
> "The program will recruit an average of three new volunteer tutors each month of the year____ as demonstrated by their service to the project."

2. Concerning Instructional–Cognitive and Affective and Product Objectives

Additional examples of instructional-cognitive and affective objectives and product objectives are provided below:

INSTRUCTIONAL OBJECTIVES (Cognitive)

1. Adult nonreaders to read for the first time.
2. Adults to increase their reading abilities the equivalent of two grade levels in a period of 10 months.
3. Volunteer and paid supervisory and teaching staff to increase their job-related skills in such areas as:
   a. the reading process
   b. diagnosing reading abilities
   c. utilizing instructional methods and techniques
   d. selecting, preparing, and using instructional materials
   e. recruiting students
   f. counseling and referral services
   g. supervision of personnel
   h. recordkeeping and other administrative tasks

INSTRUCTIONAL OBJECTIVES (Affective)

Affective behaviors in clients may be observed in each of the instructional formats: tutoring; small group discussion and individually prescribed program learning.

Behaviors for observation of staff

1. Does the learner listen attentively to different types of volunteer reading?
2. Does the learner complete all reading assignments?
3. Does the learner voluntarily read magazines and newspapers?
4. Does the learner find pleasure in reading for recreation?
5. Does the learner use reading as a tool for self-education?

PRODUCT OBJECTIVES

1. To develop or adapt instructional materials directly related to the background and interests of the target population.
2. To develop a diagnostic system for assessing student needs for reading instruction.
3. To develop a "packaged" training program for volunteer tutors and recruiters to be used in the proposed project and related future projects.

3. Concerning Process Evaluation and Impact Outcome

Another approach to understanding the attainment of program goals is to speak in terms of a process evaluation and impact outcome.

Process evaluation includes establishing the following definitions:

1. Definition of the tutoring relationship—time invested, cognitive and affective elements involved.

2. Definition of a "unit" of input by which results are to be measured. These will include numbers of tutors, students, hours of tutoring (gross and per resident).

3. Definition of dilemmas, transitions and breakdown points. How does the system set up feed into the various continuation options (a) continuing education with other adult education programs in the community (b) vocational rehabilitation opportunities (c) reentry to job and community? What is its specific contribution to each of these? At this point, we can only note that such points will be of special interest in the ongoing process of modifying the system.

4. What is the learning process of (a) volunteers (b) the community?

Impact outcome includes establishing the following measures:

1. Services delivered (in units of input). We include here an assessment of the numbers of tutors involved, and the degree to which they have absorbed the training.

2. Academic scores; pre and postmeasures. (Informal diagnostic measures and standardized tests).

3. Behavioral and affective scores, ability to own and confront own disability, ability to compete in job market, ability to use learned skills in job situation, etc.

4. Changes in self-concept and the relationship of these changes to behavioral and learning improvements.

4. Establish a Timetable for Project Objectives

List the various project objectives: product, instructional, operational; and indicate the appropriate time period for attainment. This timetable will assist the project director in management and review of the objectives and their movement toward attainment.

Once project goals are stated in clear and objective terms and a timetable is assigned, the evaluator needs to examine the data about the student, to identify the ongoing processes and the content of the program and to examine the strengths, weaknesses and failures of the program.

5. Use of Evaluation to Identify Ongoing Processes

Use your evaluation not only to establish baseline and change measures, but to identify and help explain the processes by which you affect these changes.

Change in the self-image of the student is an example of a stage in the change process for students. This is an important element which you may want to incorporate into your evaluation. Or, you may feel that in your particular program, other stages along the road to literacy are important. Identify, and document these stages if possible.

Evaluation also helps identify administrative sequences and their effect on the program. In clarifying these, roadblocks to smooth functioning of your program may become visible. For example, analysis of the methods by which volunteers are recruited, trained and integrated into the program is an essential piece of the evaluation of the volunteer contribution. Discussion of the stage of "intake" into the program at which it is best to begin keeping records, may clarify how some students fail to reach that stage of "intake." Again, the contribution of your evaluating staff in regular staff meetings and problem-solving sessions will help to define such essential processes; evaluators will find it helpful to raise such clarifying questions to other staff.

6. Reentry and Follow-Up

It is important to identify, beyond the changes made by students while they are in your program, the degree to which these changes are of practical benefit to them after leaving. Specifically, the translation of literacy skills into job skills needs to be documented.

You will need to know (a) which of your students are employed on entry to the program, and the level of that job (measured as level of skill and/or level of salary); (b) whether they are employed after leaving, and the level of skill and/or salary at which they are employed. Changes in employment status are the ultimate test of the viability of your program.

To obtain this vital information, it is essential to keep track of old students by obtaining "tracking" information, i.e. home address, job address, information on a program to which a person is referred.

7. Evaluating the Context of Your Program

Whether your program is part of a larger rehabilitation program, or stands on its own, it is important to bear in mind the effects of the context on the program, and vice versa. If you are part of a larger organization, does it help, hinder or otherwise change procedures in that organization? For instance, if it is part of a treatment/rehabilitation program, is there an improvement in treatment retention rates of the literacy program students when compared to other nonstudents of the institution? It may be also that the larger program, or the community in which you operate, unavoidably sets limits to the capacity or the functioning level of your program. While these cross-effects are hard to measure, it is important for an overall description of the program to bear them in mind.

8. Identify and Repair your Failures

Every program will have students with different skills and capacities, and every program will have its successes and its dropouts. Take an honest look at your weakest students and your dropouts, as well as your successes, and try to identify who they are, using the information you have collected early in the program. You may find there is a pattern to your successes and failures which can be changed by administrative improvements.

Work through the processes by which you try to retain students, and see if these need to be modified for the weaker ones. This is another way in which constant feedback with evaluation staff can identify problem areas and raise the overall standards of your program.

9. Identify potential students you fail to reach

If possible, identify potential students in your community who fail to enroll in the program. Talk to some of them or use a survey form to find out why. There may be practical problems you can help resolve, or fears and inhibitions you can help these people overcome. This will help you understand how effective your particular program is as a community resource.

10. Use of Consultants for Evaluation

An outside consultant is probably necessary to evaluate the project. The consultant should check at least monthly that the data is being collected and recorded properly. A data clerk or administrative assistant is necessary to handle such details.

The evaluation consultant or evaluator is also responsible for the date interpretation. The project director also receives periodic reports from the evaluator, which serve to keep the project director alert to the project objectives and the timetable necessary for each objective.

Some Standardized Tests used by Reading Academies

1. Reading Evaluation—Adult Diagnosis Test by Ruth Colvin, Follett Company, Chicago, Illinois, 1972.
2. Gates-MacGintie Reading Test, (Survey D, E, 1965, 1972, Teachers College, Columbia University).
3. SelectABLE, ABLE (Adult Basic Learning Exam) by Harcourt, Brace, Jovanovich, Inc.

Other Progress Tests

4. Informal Reading Scale
5. Employee Aptitude Survey (Psychological Services, Inc.)

6. School and College Ability Test (Educational Testing Service)
7. G.E.D. Test
8. A.B.R.I. informal (published) reading assessment for functionally illiterate adults
9. Informal Reading Test, Michael O'Donnell, Right to Read
10. Adult APL Survey published by The American College Testing Program
11. Reading/Everyday Activities in Life, REAL
12. Wide Range Achievement Test
13. Individual Reading Placement Inventory (Follett)

Resources

Hyman, H.H., Charles R. Wright, and Terrence K. Hopkins, ***Application of Methods of Evaluation***, U. California Press, Berkeley, Ca. 1962.

Nafziger, H. Dan, R. Brent Thompson, Michael D. Hiscox, Thomas R. Owen, ***Adult Literacy: An Evaluation of Currently Available Instruments*** by Assessment Projects of NW Regional Educational Laboratory, 710 S.W. Second Ave., Portland, Oregon 97204. 1975.

(Standardized test results are examined in the four crucial areas:
1. measurement validity—standardizing requirement
2. examinee appropriateness—clinical requirement
3. technical excellence—standardizing requirement
4. administrative usability—feasibility requirement.)

. . . promoting communications
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SEPTEMBER 1982

top nine criteria

The following appeared in the May/June issue of *The Ladder*, a bimonthly publication of Push Literacy Action Now (PLAN). PLAN is a nonprofit, community adult literacy program located in Washington D. C.

The D. C. Literacy Task Force has issued a list of nine criteria by which it says any literacy program ought to be evaluated.

The Washington-based group, organized last year, to promote literacy work and awareness of nonreaders' problems, said the criteria would help fill the need for some objective measurement of the organizational strength and usefullness of the hundreds of literacy groups around the country.

Service groups, individuals, companies or courts seeking to place nonreaders in some class have had no way until now to judge which of the available programs in their areas might actually succeed in teaching students to read. The criteria, which the Task Force called "essential components of adult and children's tutoring programs," stress the importance of training and supervision for volunteer tutors, a well-organized curriculum and follow-through in testing and referral.

The Task Force's professional concerns work group, chaired by Marcia Harrington, drew up the criteria after several months of reviewing available literature on literacy program evaluation and interviewing students and volunteers on their definitions of success.

Task Force chair Mike Fox added that the criteria also had another purpose: "We hope to foster some dialogue on the issue and some self-criticism among existing literacy programs."

The criteria are as follows:

1. A formal *pretesting* and evaluation of incoming students to determine reading level and suitability of the program to their needs.
2. A reliable *referral* process for students who would be better served in a different program.
3. A *flexible schedule* of classes, tailored to the needs of the students, but including a minimum of two one-hour sessions each week.
4. A qualified staff of *trainers* to prepare volunteer teachers. Trainers should be qualified by experience and/or certification to teach basic reading skills.
5. Volunteer (professional or nonprofessional) who have received *training* in the techniques of basic adult education. This means a minimum of six hours preservice and regularly scheduled in-service sessions of phonics, word recognition, language experience, comprehension strategies and basic writing techniques.
6. A reliable *teaching method* which presents a sequenced series of skills. A single method may be easier for tutors, but an eclectic approach allows for individual differences in tutors and students, encourages creativity and avoids rigidity. There should be frequent evaluation of methods. The use of newspapers, grocery store labels, street signs, coupons, job applications and the like should be considered as practical application of reading lessons.
7. A sufficient supply of *materials*. Each student should have his/her own set of the required books or workbooks, even if this means charging a nominal fee. Supplementary materials at the tutoring site should be readily accessible to all students.
8. *Evaluation* procedures. Students should be tested for progress on a regular schedule, with new methods initiated if no progress occurs. Tests may be standardized or teacher-made; trainers should work with tutors to ensure the validity of the latter.
9. An *exit procedure* consisting of testing, interviewing and referring for further study.

Those interested in this field are urged to write to the Task Force, c/o PLAN.

Feel free to contact PLAN concerning their excellent newsletter *The Ladder*. Write or call: Mike Fox, Exective Directcr, PLAN, 2311 18th Street, NW, Washington, DC 20009; 202/387-7775.

IMPROVING BASIC SKILLS IN THE CLASSROOM

Source: 1 Basic Skills Issues and Choices Issues in Basic Skills Planning and Instruction by Reed, L. and Ward, S. (Ed). St. Louis, Missouri: CEMREL, Inc., 1982 (published under contract with the Basic Skills Improvement Program, U.S. Department of Education, Washington, D.C.).

Integrating the Basic Skills through the Content Areas

Dorothy S. Strickland
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Editors' Note: *In this paper Dorothy Strickland discusses important interrelationships among the four basic skills in the development and ongoing functioning of the individual. She stresses the need to coordinate instruction in the basic skills and to coordinate basic skills instruction with other content in the curriculum. Both of these efforts, she suggests, should relate the learning experience to situations outside of school. After discussing some of the problems which interfere with the interrelating of basic skills instruction in schools, she provides a framework to help teachers to make optimum use of instructional opportunities both to teach and to reinforce each of the basic skills.*

What Are the Basic Skills?

Often, definitions of the basic skills are very narrow. For the purposes of this discussion, the basic skills are considered to include virtually every means by which humans communicate: reading, writing, listening, speaking, mathematical problem solving, and computation. When viewed as processes through which a broad array of content can be mastered, these components not only represent the foundation skills required for survival but also include the enabling skills that produce mature independent learners.

The goal is not to limit students to a narrow view of the basics but to broaden their view so that they regard the basics as a means to gaining access to the information required for successful living in modern society. This paper is intended to help teachers and administrators reexamine and reorganize the curriculum in order to integrate these basic components into a unified communications program.

How Are the Basic Skills Related?

To integrate the basic skills as defined, an understanding of them as an interrelated means of communication is important. At the heart of any communications model must be the learner's experiences, because it is these experiences that stimulate the need or desire to communicate. All learning is essentially an attempt to make each new experience fit into an existing construct of the environment. We continually add to our store of knowledge and understanding as we transform the unfamiliar into the familiar, relate the unknown to the known.

The learner's experiences represent the content on which he or she focuses. In schools this may involve the natural sciences, social sciences, creative arts, and the functional content of the survival curriculum. A broad range of "essentials" should be included in the content so that students become informed, thoughtful, participating citizens; in addition, no content of interest and importance to the learner need be omitted from the school experience. The processes through which the learner attempts to assimilate this content are the basic skills — literacy, oracy, and mathematics.

Literacy, oracy, and mathematics involve the use and interpretation of symbols that represent experience. The ability to decode and encode our experiences through symbols is a developmental process that begins at birth. The learner first engages in activities and then can discuss those experiences (talking and listening), read and write about them, and solve problems related to them. The same experiential base is drawn upon, whether the communication is through print or speech. The base can be used as a point of departure for studying topics of interest and importance to students in conjunction with activities involving the full range of basic skills.

Oracy, literacy, and mathematical problem solving involve the projection of meaning by the learner. Readers and listeners bring meaning to the content or message in order that they may comprehend it. Writers and speakers project meaning as they attempt to communicate their ideas to others. Mathematical problem solving also requires the projection of meaning in the form of prior knowledge and understandings about the concepts involved. On the basis of these understandings, the learner makes decisions about appropriate procedures for computation.

The range and quality of experience, or prior knowledge, the learner brings to each new learning experience critically affect comprehension and production. The time spent, for example, in preparing the learner for a task by providing background in vocabulary and concept development will "pay off" in his or her ability to understand and apply the content. Generally, the more concrete those preparatory experiences, the better prepared the student will be to tackle the more abstract communication processes. Preparation that takes into consideration all the basic skills involved in a task helps the learner gain access to the content, comprehend it, and use it effectively.

Although listening is related to oracy and reading to literacy, they share common characteristics as *receptive* processes. The ability to comprehend information — to recall it, interpret it, and apply it — is essential to both. Teachers who help students become more proficient readers help them become better listeners as well.

Speaking and writing share common characteristics as *expressive* processes. Whether a child composes through speech or writing, certain abilities are required. The ability to gather information, select what is significant to the topic, organize it, and present it with clarity and a sense of audience are significant to the composing process regardless of mode. Teachers who help students develop these skills through oral reporting, for example, are supporting the written composition process as well.

Mathematics involves the basic skills of listening, speaking, reading, and writing. Underlying these abilities must be an understanding of a specialized set of vocabulary and concepts, as well as a specialized means of organizing and analyzing phenomena. Competency in language is necessary to generate and analyze data for mathematical problem solving and computation; in other words, success in mathematics is directly related to oracy and literacy.

Problems Associated with Integrating the Basic Skills

Two broad issues must be dealt with when teachers attempt to integrate the basic skills. Both present numerous challenges to the teacher. The first issue centers on those problems associated with the need to teach basic skills in much the same context as they are applied — not in isolation but in combination with one another. For example, except for recreational reading, we rarely engage in reading as a separate communication skill. More often, we take notes on what we are reading or use the material for discussion purposes or mathematical problem solving. Thus reading, writing, mathematics, and oral language are seldom used in isolation from one another. These basic communication processes are so interrelated that we move from one to another with ease as we approach daily tasks involving them.

In departmentally organized school programs, and even in most self-contained classrooms, the basic skills frequently are scheduled during separate periods of the day, with little attempt to relate the content taught in one area with that taught in the others. Reading, writing, oral language development, and mathematics are planned for and taught as discrete entities. Such fragmented planning tends to perpetuate teachers' and students' misconception that what occurs during a mathematics or listening activity is distinctly different from the skills taught during reading or writing activities. To the extent that this happens, students are less likely to apply skills learned in one setting to a new situation.

As much as possible, the basic skills should be treated as a unified whole. This is the way they are most often used in real-life situations. Greater coordination among departmental staff in basic skills instructional efforts and more attention to coordination within the self-contained classroom are essential. Students should purposely be given activities planned to involve them in the use of two or more skills in combination, for example, listening and reading, reading and writing, or reading, discussing, and then solving a mathematics problem.

As much as possible, the basic skills should be treated as a unified whole. This is the way they are most often used in real-life situations. Greater coordination among departmental staff in basic skills instructional efforts and more attention to coordination within the self-contained classroom are essential.

Such activities will make both teachers and students more aware of how the various skills support one another. Sensitivity about the reading skills required in a mathematics lesson or the kind of listening skills required to take notes for a written report is strengthened. Even when lessons are focused on one basic skill, teachers should use every opportunity to help children apply other skills to the learning.

The second issue involves the integration of process and content. In real-life situations, the way we use language and math is always focused on content of relevance to us. Whether the need arises from the world of work or of recreation, the basic skills we employ are based on our need to communicate and to solve problems. There is a need to bring this same kind of relevancy into basic skills instruction by teaching the basic skills through content of interest and importance to children.

Most teachers are keenly aware of the problems associated with application of the basic skills in the content areas. In departmentalized programs students are made to focus on a particular subject area, such as science or social studies, with a specialist-teacher at specified times during the week. Mastering the course content is generally emphasized in these classes, with little thought given to instruction in the processes required to gain access to and understanding of the content.

Even in self-contained classrooms fragmented scheduling may result in the same type of instruction. Often students receive regular instruction in study skills in parallel settings apart from the content area subjects. This may be included in a developmental or remedial reading program relying heavily on workbook and worksheet exercises. The problem rests with the application of skills. It is not unusual for students to appear competent in skills in a virtually content-free, narrowly confined situation apart from "real" content in which they are interested (or at least for which they are responsible), only to demonstrate an extraordinary lack of proficiency in applying those very same skills when needed.

Greater coordination between basic skills (literacy, oracy, and mathematics) and content instruction (physical and social sciences, humanities, industrial arts, and so on) is needed. Students must be given opportunities to select and apply appropriate skills under guidance, if they are to use them as life resources. In departmentalized settings, specialized-area teachers must give sufficient time to the basic skills instruction required for students to gain access to the content under consideration. Teachers of reading/language arts and mathematics should know what topics are under consideration in the content areas so that they can support their students' efforts. Students studying ecology, for example, may be given help in locating and organizing relevant information and in preparing oral and written reports. Similarly, charts and graphs describing numerical data can be generated along with mathematical problems for discussion and analysis using the mathematics skills being taught.

The basic skills are only useful to the degree that they enable us to fulfill our need to communicate about content that is significant to us. These processes — reading, writing, speaking, listening, mathematical problem solving, and computation — merely facilitate our reception, expression, and application of content. At every level of instruction, process and content should be integrated.

Integrating the Basic Skills

The Basic Skills Integration Chart (Figure 1) is designed to help teachers achieve integration both among the basic skills and between the basic skills and the content areas. It has been well received in staff development settings and in classroom applications. Most teachers have expressed the view that it offers an easy means of ensuring full, integrated coverage of the basic skills through a thematic unit of work.

The various basic skills are depicted in terms of mutually supportive activities. Since most teachers prefer to deal with actual activities rather than lists of objectives or subskills, this approach appeals to them.

In row 1, box 2, activities showing how reading and writing support each other are illustrated. Next, the interface between reading and listening is shown, then reading and speaking, and so on. The grid presents the interrelationships among the basic skills in a practical way for immediate teacher use. By applying the grid to a specific grade level and topic, the teacher can generate a set of activities specific to the needs of a particular group. An entire unit of work can be built in a way that accounts for both content and basic skills instruction. To use the chart teachers are asked to

1. Decide on the grade level or levels to be served.
2. Decide on a content theme. Science or social studies themes work best.
3. Decide on a limited number of specific content and process goals and objectives.
   a. Content goals and objectives relate to the substantive material under consideration. Example: Study of how archeologists contribute to our understanding of civilization.
   b. Process goals and objectives relate to the basic skills operations the students are expected to develop. Examples: Use of the card catalog (reading/study skills); collection and organization of data to make a bar graph (mathematics).
4. Use the information in each box in the grid to generate activities appropriate for 1, 2, and 3.

Figure 2 shows an example of how teachers can use the Basic Skills Integration Chart to organize a set of integrated activities around a theme. Positive outcomes associated with using the chart include the following:

- Teachers are forced to think in terms of process and content simultaneously. The activities they plan emerge as the result of a purposeful effort to integrate skills. They are not activities planned for activity's sake. Teachers not only know what they plan to do but why.
- By purposely merging process and content, teachers can reduce the constant problem of trying to find time in the day for all that is considered important.
- If the students have been properly motivated, there is built-in interest in the application and development of the basic skills. Desire to get at and apply the content promotes basic skills instruction.
- Identifying at least some of the objectives in advance helps teachers to focus their activities on specific skills or subskills for which they may be accountable.
- At a time when accountability for specific skills is stressed, teachers can engage children in interesting activities related to topics that naturally emerge in the classroom and still feel in control of systematic basic skills instruction.
- Specific subskills may be accounted for by breaking down any one of the communication skills presented. For example, if a

teacher wants to concentrate on oral reporting as the type of speaking activity to be stressed in a particular unit or theme, the following subskills might be emphasized and evaluated: organizes information well, speaks clearly, and has a sense of audience. Some of the activities slotted into the "Speaking" boxes in the grid would allow practice in and demonstration of those subskills.

Conclusion

Integrating the basic skills requires curriculum implementation that not only stresses the teaching of reading, writing, mathematics, and oral language in conjunction with one another but also emphasizes that they be taught through content of interest and importance to the learner. Every opportunity to interrelate instruction in the communication processes with one another and with the social and natural sciences is critical.

An approach that helps teachers to plan for integration allows instruction to take place in a natural, holistic manner. At the same time, administrative requirements for monitoring basic skills objectives in an organized way can be satisfied.

	Literacy		Oracy		Mathematical Communication
	Reading	**Writing**	**Listening**	**Speaking**	**Problem Solving and Computation**
Reading		Reading serves as model and stimulus for written composition. Children read each other's material and that of professional writers.	Listening to literature read aloud strengthens auding skills for enjoyment and for special purposes. Reading and listening are receptive processes dependent on comprehension.	Reading provides material and models for oral composition: storytelling, reporting, dramatic readings, poetry.	Reading provides access to information requiring mathematical solutions or attention. Reading involves the interpretation of tables, charts, and graphs.
Writing	Written composition produces charts, stories, books for classroom use as reading materials.		Written composition may be read aloud or tape recorded for others to enjoy and gain information from.	Professional- or child-authored materials may be read aloud. Notes may be used as basis for oral reports. Writing and speaking require ability to select significant ideas and organize with clarity and sense of audience.	Written composition may involve taking a set of circumstances and composing a written problem for solving. Information written in narrative may be condensed into simple tables, charts, graphs.
Listening	Listening to literature read aloud motivates reading and adds to one's store of information and enjoyment.	Listening to stories and reports provides the basis and stimulation for written composition.		Critical listening to spoken word strengthens ability to reason and to respond orally. Listening provides model for oral composition.	Listening to a set of circumstances can lead to learning how to proceed toward a mathematical solution.
Speaking	Stories and poems may be read aloud or dramatized. Oral reports, descriptions, and explanations may be aided by written notes. Discussion may provide impetus for further reading.	Storytelling or reporting may be the outgrowth of or stimulation for composition.	Reporting, sharing, and discussion provide material for various types of listening.		Oral description of a set of facts or real-life circumstances may lead to a discussion of alternative ways to approach mathematical problem solving.
Problem Solving and Computation	Problems and examples may be read for analysis and problem solving. Graphs, charts, math examples may be analyzed.	Children write their own story problems for others to solve. Sentences may be written in words or in numerals and math signs.	Purposeful listening to solve a problem may lead to mathematical solutions and the use of mathematical principles to make predictions, estimating.	Discussion of everyday situations may be translated into mathematical terms for problem solving. Children may orally compose problems for others.	

Figure 1. Basic Skills Integration Chart.

Grade 5
Topic: King Tutankhamen

		Literacy		**Oracy**		**Mathematical Communication**
		Reading	**Writing**	**Listening**	**Speaking**	**Problem Solving and Computation**
Literacy	**Reading**		The learner will read the telegram sent by Lord Carnarvon and write his or her own original version.	The learner will read a description of the death mask and draw a picture of it for sharing and discussion.	The learner will read about the wooden articles found and discuss their possible uses.	The learner will read a time line in order to determine in what century Tut reigned.
	Writing	The learner will write a story describing the first day of discovery.		The learner will write an original cinquain poem about King Tut to share with the class.	The learner will take notes on the kinds and uses of jewelry found in the tomb and report orally to the class.	The learner will help to create a mail order catalog of items selected from King Tut's tomb and write related problems for others to solve.
Oracy	**Listening**	The learner will listen to an explanation of the mummification process and then read the account of King Tut's mummification.	The learner will listen to the description of the game items found in the tomb and write about what games he or she would have placed there.		The learner will listen to the explanation of how each article was removed and then discuss the process.	The learner will listen to an account of the number of hours spent uncovering the treasures in the antechamber in order to compute the hours into days and to create problems involving manpower and wages.
	Speaking	The learner will discuss and dramatize the discoverers' dialogue at the exposition of the burial chamber and read further on articles found inside.	The learner will report orally on items placed in the tomb for Tut's afterlife and then write a story stating what he or she would have put in the tomb.	The learner will explain orally the use of a pomander in demonstrating mummification and then answer questions and discuss the changes that will take place.		The learner will orally give the dates of major events in Tut's life to determine the Boy King's chronologic age at a given event.

Figure 2. Use of Basic Skills Integration Chart. (After Linda Derrig, teacher, Seattle)

A THEMATIC INTERDISCIPLINARY APPROACH TO BASIC SKILLS IN THE SECONDARY SCHOOL

by

M. Jerry Weiss

Source: Developing Basic Skills Programs in Secondary Schools, Daisy G. Wallace (Ed.), Association for Supervision and Curriculum Development (225 N. Washington Street, Alexandria, Virginia 22314), 1981, under contract with the Basic Skills Improvement Program, U.S. Department of Education, Washington, D.C.

A Thematic Interdisciplinary Approach to Basic Skills in the Secondary School

M. Jerry Weiss

The key person in an interdisciplinary approach to basic skills instruction is the reading teacher. Since the ability to read and comprehend subject matter is so vital to achievement in all content areas, the reading teacher can do much to help teachers in every department promote student success.

Initiating an Interdisciplinary Unit

The Reading Committee

The first step in developing a thematic interdisciplinary program is to form a reading committee comprised of interested volunteers. The committee should be chaired by the reading teacher or reading specialist and include representatives from each department, the library staff, and guidance services, as well as an administrator with the authority to make schoolwide decisions and take actions.

The committee's purpose is to reach definite conclusions about the function of the reading instruction in the school. It considers what shall be taught, when, by whom, with what materials, and how different departments can reinforce each other's efforts. The reading teacher raises questions the committee needs to consider before making recommendations. The reading chair also suggests methods and materials that will allow more students to succeed through joint teaching efforts, rather than through one person's efforts in a reading laboratory or center. Since each person on the committee contributes to reading instruction, the reading teacher can help committee members understand the role each department and each special service plays in meeting students' reading needs.

Committee meetings need to focus on the following key topics:

1. Formal and informal diagnostic techniques—ways to find out what hinders and what helps student progress.

2. Design and effective use of interest and experience inventories for each discipline so that classroom teachers will receive appropriate background information about students.

3. Realistic goals for mastery of content—objectives based on the understanding that a variety of skill levels are present in a single classroom.

4. Skills necessary to meet the goals—reading, writing, listening, speaking, and viewing skills.

5. Resources needed to complete assignments—print and nonprint.

6. Motivational and project activities that will stimulate and maintain student interest.

7. Suggestions for teaching the skills—use of worksheets developed by the teacher, or commercial resources and games; the effective use of media, lectures, and demonstrations; problem-solving activities that require students to identify, learn, and apply skills.

8. Suggestions for evaluating student progress—teacher-made tests related to the specific skills and objectives to be mastered; daily observations of students while they work on assignments; student participation in class discussions; quantity and quality of materials used to fulfill assignments; students' ability to transfer skills and ideas to a variety of situations; students' development of characteristics such as dependability, initiative, promptness, independence, cooperation, organization, articulation, resourcefulness.

Other matters may arise at the committee meetings, but these need to be explored in depth. Recordkeeping, homework assignments, and teacher-student conferences are also important in helping teachers develop management procedures for working with students and meeting special individual and group needs.

Members of the committee should take the minutes of each meeting to their respective departments for discussion and to obtain feedback. It is important that the total faculty get a feeling for the concerns and deliberations of the committee. Excellent questions may arise during a department meeting that should be discussed during a reading committee meeting as well. This arrangement fosters an inservice program that starts with the committee and spreads to all staff members.

Once enough recommendations have been made, the committee can request a pilot program to initiate a thematic unit taught by an interdisciplinary team. That team should consist of four or five teachers from different departments who share the same 100 or so students.

Scheduling for Team Teaching

Scheduling is important, both for the teachers and the students. Team members should have a common preparation period each day. A schedule such as the one below facilitates planning; teachers can use the preparation period to meet with each other or with small groups of students, or to develop their individual lesson plans. During the same block of time, students should be scheduled for gym classes, electives, or study hall—classes they can afford to be taken out of if they need special help or the opportunity to work on projects in the thematic basic skills program.

Figure 1. Teacher Schedule

Teacher and Subject	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Period 7
Adams (English)	8^1	8^2	8^3	8^4	lunch	8^5	preparation
Baker (S. Stud.)	8^2	8^3	8^4	8^5	lunch	8^1	preparation
Carney (Math)	8^3	8^4	8^5	lunch	8^1	8^2	preparation
Dale (Science)	8^4	8^5	8^1	lunch	8^2	8^3	preparation
Edwards (Music)	8^5	8^1	8^2	lunch	8^3	8^4	preparation

Using this schedule, students are heterogeneously grouped in classes of 20 to 25 per period. When initiating the program, it is best to have fewer students in each section to give teachers enough time to acclimate

themselves to the new procedures. They must learn to plan together, to cooperate, to discuss ways for using blocks of time with ease and flexibility.

For example, if the English teacher wants to show a full-length movie about the topic being developed, he or she can show the complete movie in one day to all of the students. The other teachers can watch the movie and draw examples that apply to their own subjects. Or, if the science teacher needs to keep some students for a double period, the other teachers on the team can adjust their instructional plans accordingly. This back-to-back scheduling allows more effective use of teachers' and students' time. Certain lessons should not be ended after 40 minutes simply because the bell rings; learning does not necessarily revolve around such a time sequence.

The teachers who are selected for the pilot project should be given time for inservice. They should be compatible and sensitive to the needs and interests of students. They should also understand the importance of reinforcing each other's efforts and standards.

Students should be made aware of those standards from the start. For instance, rules for completing assignments should be posted on bulletin boards—not to be looked at and forgotten, but to be reinforced by the teacher, who should make his or her expectations known to the students.

The Reading Teacher's Role

Once the pilot program has begun, the reading teacher's role is to work with teachers in their classrooms. As the theme unit is developed and implemented, the reading teacher helps identify necessary skills for successful mastery of the subject, and suggests materials and methods useful for teaching the students these skills within the context of the unit. At times, a reading teacher can work with groups of students in the cluster who need help with specific skills.

The major function of the reading teacher is to help classroom teachers assume more responsibility for and confidence in teaching reading skills in the content areas. In many secondary schools, students are pulled out of classrooms and assigned to a reading center for special help. Not many schools organize skill instruction in coordination with specific content area needs or provide a successful transfer of skills learned in laboratories and centers to the regular classroom. In contrast, the thematic unit plans with cluster teaching offer a wide range of reading materials for all students to use. Teachers work together to help students master concepts and skills from discipline to discipline.

The mastery and application of basic skills and the development of a positive attitude occur when students are surrounded by a variety of books on many subjects and when they experience a variety of approaches to learning.

Among the topics that have been used successfully as interdisciplinary themes are (1) consumerism, (2) running the country, (3) cities and urban life, (4) other countries and tourism, (5) conflicts and resolutions, (6) a world after the last war, and (7) growing with healthy minds and bodies. All five disciplines cut across all of these themes.

What follows is a description of a sample unit adapted to the thematic, interdisciplinary approach. The theme of this unit is communications.

Sample Unit:
Introduction to the World of Communications

Concepts

The major forms of communication to be studied during the next six to eight weeks are (1) music and art, (2) radio and television, (3) film, (4) the press, and (5) theater and dance.

Students will be grouped according to their interest in studying *one* of the five subgroups listed above. (If a student chooses the first area, he or she will work in both art and music.)

Some key topics to be developed: (1) Who are/were some of the major personalities identified with this field of communications? (2) How has technology changed or contributed to the development of communications, particularly the area you are studying? (3) What talents and resources are needed in each area? (4) How have the developments and changes within the communications field affected social customs and lifestyles? (5) What educational experiences are suggested for a better understanding of the communications world and the future of this field? (6) What careers are possible for people interested in a particular field of communications?

Suggestions for Areas for Skill Development

1. Reading

- Specialized vocabulary—symbols, manual dexterity, perception, tone, inflection, harmony, rhythmn, texture, color, aesthetics, imagery, soundtrack, settings, patterns, verbal, nonverbal, form, intuition, visual literacy, tactile, auditory, sound waves, light waves, mass media, gold record, satellite, zoom, microphone, situation comedy, soap opera, documentary, jazz, concerto, symphony, opera, ballet, modern dance, choreograph, edit, blues, soul, country-western, classical, syndication, comedy, tragedy, farce, "ratings," connotation, denotation, semantics, linguistics, interview, columnist, producer, director, press agency, photographer, gesture, mime, sign language, body language, makeup, lay out, musical score, costumes, sound effects, script, cue, screening, show format, marketing and sales, promotional tour, transmit, stage directions, casting, staging, tape playback, countdown, engineer, special effects, "Grammy," "Emmy," "Oscar," "Tony," timing, technical crew, ADI (areas of dominant influence), spot announcements, props, RPM, adaptations.

- Use of reference materials
- Reading diagrams, charts, tables, maps
- Reading and interpreting scripts
- Following directions
- Understanding a time line
- Sequencing
- Seeing a cause-effect relationship
- Understanding propaganda devices
- Skimming for pertinent information
- Outlining
- Note-taking
- Interpreting visual symbols
- Interpreting body movements

2. Writing

- Research techniques and reports
- A variety of newspaper stories—feature articles, interviews, news stories, advertisements, editorials
- Writing and interpretation of a statistical survey
- Playwriting (for stage, radio, film, or television)
- Photo-essays
- Writing and illustrating books or magazine articles
- Cartooning, including drawing and captioning
- Writing headlines
- Writing poems, songs, or short stories

3. Listening

- To recordings, dramatic and musical
- To stories told by classmates, teachers, special guests
- To sound effects as part of laboratory experience in sound identification

4. Speaking

- Oral reports
- Participation in dramatic activities
- Class discussions
- Panel and forum presentations
- Persuasive argumentation (selling, advertising, promotional efforts)
- Effective use of propaganda techniques
- Sing-alongs including parodies and original songs as well as a variety of types of songs—hymns, folk songs, gospels, popular songs, musical theatre songs, and semi-classical songs

5. Viewing

- Art exhibits and displays
- Film techniques and reviewing
- Television programming and reviewing
- Filmstrips
- Photographs
- Book and magazine illustrations
- Advertisements

6. Mathematics

- Have students count the number of commercials shown on one channel between 8:00 p.m. and 10:00 p.m. each weekday night.
- Find the cost of each commercial and calculate how much money the station made during five days.
- Have the students figure out the number of column inches in one daily newspaper devoted to international and national news, regional and local news, obituaries, sports, entertainment, department store advertisements, grocery store advertisements.
- Determine what percentage of the paper contains advertisements and what percentage contains news, including editorials, feature columns, syndicated columns, and comics.
- Divide the class into groups of four. Each group has $2 million to promote a new product or special event. Have each group use advertising rate cards for radio, television, newspapers, and magazines to plan the advertising campaign within the budget. (Students interested in art or music or journalism, should try developing the actual ad programs.)
- Have each student use a major weekly magazine to determine the amount of advertising in a single issue.
- Problem: A student has been selected to be a disc jockey for a local radio station. The DJ is on from 3:00 p.m. to 6:00 p.m. Fifty 20-second spot commercials must be injected during this time. Plan a program of music and commercials to fill that slot. Allow some time for patter. Students must indicate where commercials fit and the playing time for each period. List title of record, performer, and playing time for each record.

7. Some Possible Motivational Activities:

- Show the documentary film, *When Comedy Was King*, and discuss the development of film comedy from the silent days through films of the early 40s.
- Have students raise question about the field of communications in which they have the most interest.
- Give students a list of commercials, and have them identify the product associated with each commercial. (Heavenly Coffee; Fly the Friendly Skies; We Try Harder; The White Tornado; Better Things for Better Living Through Chemistry; It's the Real Thing; You Deserve a Break Today; Take the Bus and Leave the Driving to Us; When It Rains, It Pours; We're Bullish on America; When You Care Enough to Send the Very Best.)
- Have each student take one new product or event and plan a total advertising campaign for it—for radio, newspaper and magazine, television, posters, bumper stickers, and buttons.

- Have students in other classes react to the advertising efforts.
- Invite a guest speaker from each of the five areas of communications to describe the activities involved in each of these areas.

Instructional Activities

The key topics listed under the category of "Concepts" will be the guiding purposes for planning instructional activities. Some key names that students should know might include: Thomas Edison, Woody Allen, David Sarnoff, Orson Welles, Helen Hayes, Billie Holiday, Leonard Bernstein, Norman Rockwell, Andrew Wyeth, G. B. Trudeau, Johnny Carson, Ed Sullivan, the Barrymore family, Jessica Tandy and Hume Cronyn, Alexander Calder, Salvador Dali, Andy Warhol, Marc Chagall, Carl Sagan, Edward R. Murrow, Dan Rather, Pauline Kael, Marshall McLuhan, James Agee, Mack Sennett, D. W. Griffith, H. L. Mencken, Alfred Hitchcock, Ingmar Bergman, Walter Kerr, Tom Wolfe, John Simon, Charles Chaplin, Kenny Rogers, Loretta Lynn, Walt Disney, Louis Armstrong, Duke Ellington, Reginald Rose, Tennessee Williams, Edward Albee, Ossie Davis, Sidney Poitier, Ruby Dee, Eugene O'Neill, Gore Vidal, Stan Kenton, Eubie Blake, Ogden Nash, Martha Graham, Bob Fosse, Michael Kidd, Hermes Pan, Fred Astaire, Jose Limon, Edward Steichen, William Randolph Hearst, Henry R. Luce, Adolph S. Ochs.

Questions students might be asked to consider include: What criteria should be used in evaluating the effectiveness of the communications processes? What factors might affect the effectiveness of any communications process? Students might also be asked to develop a publication, *Today's Communications World*. Have students from each group write articles for this new publication. Discuss what articles might appeal to potential subscribers. Develop advertising rate cards for potential advertisers.

Pictures speak louder than words. Take the following ten concepts, and have students divide into interest groups around each of these topics and develop a collage that conveys their ideas about the subject: (1) Unity in Diversity; (2) The American Dream; (3) The Power of Laughter; (4) The Values of Freedom; (5) The Importance of Creativity; (6) Justice for All; (7) The Future; (8) a Sense of Beauty; (9) The Technological Society; (10) Numbers in Our Lives.

Have students do a survey of the television shows, radio shows, or movies they listened to or watched during the past month. Prepare graphs to depict the results of each survey.

Have students attend a theatre production, a concert, or a dance presentation, and write a news article and a feature article about their experiences.

Have students visit a local radio station, television station, or newspaper plant, and have the students write a brief report of their visits.

Have students visit a museum and plan an oral and, if possible, visual presentation based on that trip.

Have students adapt a poem or short story for radio, television, film, stage, or dance.

Have students listen to an old show album, such as *Oklahoma*, and plan a modern story to accompany the music and lyrics. Have other students design sets and costumes.

Have students interview an author who lives within a reasonable distance of the school; plan the interview session as if it were to appear on television, radio, or in a magazine.

Have students working in the press area send letters to five different magazines and newspapers asking for a sample copy. At the same time, request a copy of the advertising rates for that publication and compare the costs for promoting certain products. Who pays for the advertising? How does this affect the consumers?

Have the music and art group take each of these titles and plan ways for developing interest in ten books and movies with the following titles: (1) *Ragtime;* (2) *The Comic World of Peanuts;* (3) *Stained Glass;* (4) *A Host of Ghosts;* (5) *Gone With The Wind;* (6) *Folk Songs U.S.A.;* (7) *Portrait of a Hero;* (8) *Tunnel Vision;* (9) *Bring Me Your Dreams;* (10) *Super Fantasy.*

Have each group make a scrapbook on the assigned general topic in which they collect articles and examples, and write explanations of why these are worth preserving. Complete bibliographical information should be included in the scrapbook for each article and picture.

Each student should keep a personal bibliography of all of the sources used for finding information about the assigned project. Comments on the articles and books also should be included.

Arrange a panel of students who will present different points of view on each of the following topics: "The Effects of Mass Media on Our Society"; "The Importance of the Arts in the Modern World"; "How Free Should a Free Press Be?"; "The Future of the Computer in the Communications Fields."

Grouping

Students should be grouped according to interests in the specific topics and for skills needs for completing assignments as required. In addition, students particularly talented in music, art, drama, photography, or writing should work in groups that best use their talents.

Evaluation

Each student will submit a written report to show what has been learned. (This might be part of group's report.) A bibliography of books and other materials should be included.

Each student will participate in an *oral* presentation with his or her group to share what has been learned about the area of study. Students will be evaluated on the effectiveness and accuracy of oral presentation.

All students will fill out a questionnaire to determine their attitudes toward the unit of study. (Popham has some excellent suggestions for assessing affect as a part of an evaluation process.)

All students will take a test to see how well they have met the objectives of the course. (A pretest can be given to determine what the students already know about the unit as well as to determine what skills have been mastered. The pretest also will identify a student's strengths and weaknesses in certain skill areas, and the data should be used for planning specific instructional programs.) The final test will also indicate how well basic skills related to the unit of study have been mastered.

Teachers can observe daily growth as students complete their assignments. As skills are taught, teachers can note which students have mastered the skills and can apply them and which students might need additional help or more time.

Sample Bibliography for Communications Unit

Ames, Evelyn. *A Wind From The West*. Boston: Houghton Mifflin, 1970.

Apel, Willi, and Ralph T. Daniel, eds. *The Harvard Brief Dictionary of Music*. New York: Pocket Books, 1961.

Battcock, Gregory, ed. *The New Art: A Critical Anthology*. New York: Dutton, 1973.

Bernstein, Leonard. *The Infinite Variety Of Music*. New York: Signet, 1970.

Bing, Rudolf. *5000 Nights At The Opera*. New York: Popular Library, 1973.

Casals, Pablo. *Joys And Sorrows*. New York: Simon & Schuster, 1970.

Clurman, Harold, ed. *Famous American Plays Of The 1930's*. New York: Dell, 1973.

Cohn, Nik. *Rock From The Beginning*. New York: Pocket Books, 1970.

Corrigan, Robert W., ed. *Twentieth-Century British Drama*. New York: Dell, 1965.

de Mille, Agnes. *Speak To Me, Dance With Me*. Boston: Little, Brown, 1973.

de Veaux, Alexis. *Don't Explain: A Song Of Billie Holiday*. New York: Harper & Row, 1980.

Dobbs, Stephen M., ed. *Arts Education And Back To Basics*. Reston, Va.: National Art Education Association, 1979.

Edmondson, Madeleine, and David Rounds. *The Soaps: Daytime Serials of Radio And TV*. New York: Stein & Day, 1973.

Ellington, Edward Kennedy. *Music Is My Mission*. New York: Doubleday, 1973.

Francks, Olive R., and Claire Ashby-Davis, ed. *Tapestry: The Interrelationships Of The Arts In Reading And Language Development*. Elmsford, N.Y.: Collegium Book Publishers, 1979.

Gattegno, Caleb. *Towards A Visual Culture: Educating Through Television*. New York: Avon, 1971.

Hansberry, Lorraine. *A Raisin In The Sun—The Sign In Sidney Brustein's Window*. New York: Signet, 1966.

Harris, Julie. *Julie Harris Talks To Young Actors*. New York: Lothrop, 1971.

Hearn, Michael Patrick. *The Art Of The Broadway Poster*. New York: Ballantine, 1980.

Hellman, Hal. *Communications In The World Of The Future*. New York: M. Evans, 1969.

Hellman, Lillian. *The Collected Plays*. Boston: Little, Brown, 1972.

Highman, Charles, and Joel Greenberg. *The Celluloid Muse: Hollywood Directors Speak*. New York: Signet, 1972.

Kael, Pauline. *Reeling*. New York: Warner, 1977.

Kirschner, Allen, and Linda Kirschner, ed. *Film: Readings In The Mass Media*. New York: Odyssey Press, 1971.

Kirschner, Allen, and Linda Kirschner, ed. *Radio And Television: Readings In The Mass Media*. New York: Odyssey Press, 1971.

Koch, Howard. *The Panic Broadcast: Portrait Of An Event*. Boston: Little, Brown, 1970.

Lackman, Ron. *Remember Radio*. New York: Putnam, 1970.

Lackman, Ron. *Remember Television*. New York: Putnam, 1971.

Leinwoll, Stanley. *From Spark To Satellite: A History Of Radio Communication*. New York: Scribners, 1979.

Mayer, Martin. *About Television*. New York: Harper & Row, 1972.

McCabe, Peter, and Robert D. Schonfeld. *Apple To The Core: The Unmasking Of The Beatles*. New York: Pocket Books, 1972.

Mersand, Joseph, ed. *Three Dramas Of American Realism*. New York: Washington Square Press, 1961.

Miller, Jim, ed. *The Rolling Stone Illustrated History Of Rock And Roll*. New York: Random House, 1980.

Monaco, James. *How To Read A Film*. New York: Oxford, 1977.

Morse, David, ed. *Grandfather Rock*. New York: Dell, 1973.

Newman, Edwin. *Strictly Speaking*. Indianapolis: Bobbs-Merrill, 1974.

Newmeyer, Sarah. *Enjoying Modern Art*. New York: Signet, 1957.

Olfson, Lewy, editor. *50 Great Scenes For Student Actors*. New York: Bantam, 1972.

Pleasants, Henry. *Serious Music—And All That Jazz!* New York: Simon & Schuster, 1971.

Quick, John. *Artists' And Illustrators' Encyclopedia*. New York: McGraw-Hill, 1969.

Source: I Basic Skills Issues and Choices Issues in Basic Skills Planning and Instruction by Reed, L. and Ward, S. (Ed). St. Louis, Missouri: CEMREL, Inc., 1982 (published under contract with the Basic Skills Improvement Program, U.S. Department of Education, Washington, D.C.).

Classroom Management: Making Time to Learn Basic Skills

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Editors' Note: *Research and experience suggest that, regardless of the approach to instruction chosen, a crucial factor in learning is the management of the classroom. In this paper Linda Anderson reviews research on what comprises effective management with emphasis on the impact on time students are actively involved in learning. She provides examples of interactions of two different teachers with their students to contrast effective and ineffective approaches to management. She then reviews the essential management skills and discusses implications of the paper for staff development and administrative supports. Although Dr. Anderson's major concern is with more effective instruction, most of what she has written here also has implications for effective discipline.*

Most of the papers in this handbook are concerned with decisions about basic skills program content. The many different opinions make it clear that these are not easy decisions. For the moment, however, let us assume that some decisions have been reached about what skills will be emphasized and what programs will be used to teach those skills. After the approach has been selected, decisions must be made about how to get the programs started in classrooms and how teachers will present the skills.

This paper focuses on basic skills instruction in the classroom after goals and objectives have been decided. In particular, the importance of the teacher's classroom management skills is emphasized. *Effective classroom management is critical to the success of any basic skills instructional program.*

Classroom management involves much more than discipline and maintaining quiet. As discussed here, classroom management includes such teacher responsibilities as organizing the physical environment and student movement through the room, scheduling and pacing various activities, organizing instructional supplies and materials and arranging for their use in ways that facilitate learning, keeping up with student progress for the purpose of guiding instruction, monitoring students' attention and behavior to ensure that they benefit from instructional activities, and attending to the many routine details of school life (such as lunch arrangements, storage of outdoor wear, and collection of fees).

The purpose of classroom management is to support instruction and to create an environment in which students can learn most easily. In this sense the teacher is similar to a manager in the business world. All managers are responsible for seeing that group members know what to do and how to do it so as to maximize the goods or services being produced. In the business world, it is taken for granted that the manager's role is necessary. Once decisions are made about new designs or techniques, managers are involved in the implementation of the new plans. Poor management is considered a serious problem in the business world, because it leads to decreased output and less profit, no matter how good the production designs and techniques.

In a classroom, teachers are managers as well as planners and deliverers of instruction, liaison with home and community, and sometimes counselors. However, just as in the business world, if the management is inefficient, other efforts will not yield the desired "product" — each student's learning and development, including achievement in the basic skills.

In this paper, classroom management research is reviewed with special emphasis on ways that teachers manage students' "time on task." Other equally important aspects of management, such as grouping, are not touched on here, because of space constraints.

Time on Task Research

Research conducted in real classrooms supports the importance of management. One purpose of these classroom studies was to relate many types of day-to-day classroom occurrences to important student outcomes, such as basic skills achievement and attitudes toward school.

The assumption underlying such studies has been confirmed repeatedly: individual teachers and what they do in the classroom make a difference in student achievement in the basic skills. That is, some teachers' classes consistently achieve higher on standardized tests than might be expected, given the students' entering achievement, and other teachers' classes consistently score lower than expected (Brophy, 1979; Good, 1979; Good, Biddle, and Brophy, 1975).

Thus, the individual teacher and the way he or she teaches are important factors to consider in improving basic skills learning. This reasoning does not deny that curriculum and school setting are also important factors but emphasizes that it is the teacher who must "put it all together" and bring the instruction to life.

Therefore, researchers have worked to identify those aspects of teaching that make a difference in student outcomes. One of the most important predictors of student achievement in the basic skills of reading, mathematics, and language is the teacher's success at classroom management (Brophy and Putnam, 1979).

Why is classroom management such a potent predictor of achievement? One explanation is that a result of effective management is increased time in which students are engaged with instruction or learning activities. The importance of adequate "time on task" has been demonstrated in many research studies (Denham and Lieberman, 1980; Rosenshine and Berliner, 1978). Good classroom management prevents wasted time and minimizes disruptions that distract students from involvement with learning.

One of the most important predictors of student achievement in the basic skills of reading, mathematics, and language is the teacher's success at classroom management . . .

It makes sense that students who are given more time for learning will be more likely to benefit from instruction. However, the quality of that time is critical. One important result of the study of time use in classrooms is the distinction between "scheduled time" and "engaged time." Scheduled time is formally allotted to a given subject or activity. Engaged time is the time during which a student actually is involved with the content during the scheduled time. For example, a teacher may schedule thirty minutes a day for mathematics instruction and activities. Few students will spend the entire thirty minutes actually engaged in mathematics activities. All learners are distracted occasionally, some spend time performing necessary routines (such as sharpening pencils), and some are delayed in their progress because they have questions about their tasks. All of these factors influence the amount of engaged time that occurs within the scheduled time.

How students spend their time in class, that is, the amount of time they are engaged, is greatly affected by the teacher's management of the classroom. Resulting differences in students' time use may be an important factor reflected in differences in achievement scores, given adjustments for beginning achievement. Hence, it is easy to understand the strong connections between effective classroom management and student achievement: *What the teacher does to establish and maintain the flow of events in the classroom influences how easily and willingly the students can attend to, interact with, and learn from the instructional activities.*

To illustrate this point, two examples are given below of teachers conducting mathematics lessons with similar students, similar objectives, and similar access to resources (although their use of the resources varies). Each teacher is following the new school policy on teaching certain basic mathematics skills. Each is using the new curriculum program being piloted in the school.

In each class, the teacher has scheduled a thirty-minute period in which students are to practice application of material presented earlier. As you read, think about how the students use the time.

Classroom A

1:05 The students return from lunch. Several congregate around a friend's desk and chat about an occurrence on the playground. The teacher asks them three times to be seated.

1:10 Finally all students are seated. The teacher passes out two worksheets to each student. While doing so, she corrects some students for talking and stops to help another student locate his book.

1:14 The teacher begins the explanation but waits while two students sharpen their pencils.

1:16 While the teacher explains the worksheets, students call out questions, which she answers, and a few irrelevant comments. Once the teacher stops to ask students in the back row to pay attention.

1:23 The teacher finishes the explanation and tells the class to begin working. She briefly returns to her desk and then momentarily leaves the room to return forms to the office. About half of the students start working.

1:25 The teacher returns from the office and checks on a student with his hand up. He is confused, so she works with him for ten minutes.

1:30 Seven students have finished and remain at their seats, chatting, with nothing else to do. Seven other students alternately work on their assignments and chat or wander about. Occasionally the teacher reminds some students to be quieter, but this does not reduce the noise or activity level. Two students do not understand the procedures and complete the assignment incorrectly (they will not realize this until the next day when work is returned). Five other students work only the first few problems and spend the rest of the time socializing. They do not complete the assignment.

1:35 The teacher looks up from the student she is helping and announces that it is time to leave for assembly. Students who did not finish their papers are instructed to finish them at home.

Classroom B*

1:05 The students return from lunch and pick up two worksheets from baskets before they go to their seats. (Before dismissal for lunch, the teacher told them to do this, and then she reminded them as they entered the room.) Some students quickly sharpen their pencils before being seated (according to established routine).

1:07 All students are in their seats with worksheets and sharp pencils. The teacher begins the explanation. According to routine, the students hold their questions until she is finished and has worked an example problem. Then she asks for questions. There are none at this point.

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* Some of the instructional principles in effect in this anecdote are based on a mathematics teaching model designed by Good and Grouws (1979). Readers may consult this source for an organized set of suggestions for management of mathematics lessons.

1:11 The students start working, while the teacher circulates through the room, looking at each student's work.

1:13 Four students who are having difficulty applying the principles are called over to a table, where the teacher reteaches the concept or skill. The other students are working independently. Occasionally a student whispers to another one, but then returns to work. The teacher periodically looks up from the small group to scan the room but does not interrupt her instruction.

1:20 The teacher gives three practice problems to the group at the table and goes to check on the other students' progress. She answers a few brief questions and discovers that two students have not made much progress because they have been drawing funny pictures for each other. She separates them and reminds them that unfinished work must be completed during recess or after school. They resume work.

1:24 After checking on all of the students at their seats, the teacher returns to the small group while they finish their problems. She checks the answers, gives the students a short practice assignment, and then dismisses them.

1:25 As students finish the worksheets, they go to the math center to choose another activity. About half have chosen afterwork options in mathematics and are working intently on games or other exercises.

1:30 The teacher reminds the students that they have five minutes before assembly. They start to clean up their desks.

1:35 The students exit, placing completed work in the basket as they go. All students finished the assignment; some students also did enrichment work.

Several points are apparent from careful reading of the two anecdotes. Most important, in classroom B more students spent more time actively engaged with mathematics content. In classroom A only twelve of the thirty minutes were used for active practice of the concept or skill. Nearly the same time (eleven minutes) was required to get students settled and supply worksheets. The teacher's explanation lasted seven minutes, half of which time was taken by questions she had planned to answer later in her explanation and by the need to call for students' attention. Within the twelve minutes left for practice, some students "played around," some did their work and then were unoccupied, and others practiced incorrectly.

Students in classroom B conformed with the teacher's expectation that they follow routines to use time efficiently and to concentrate on their work during the time allotted. As a result, they spent more time engaged with appropriate tasks. Those students not ready for the class assignment were quickly identified and given the instruction they needed. Students who rapidly completed their work engaged in activities that reinforced other aspects of mathematics.

Two constraints are apparent from such classroom observations. First, teachers have a limited amount of time into which they must cram instruction in many content areas as well as many other school activities (such as assemblies). One result of the many required activities is that the day is broken into shorter segments. Transitions between instructional segments, if handled inefficiently, can further erode available instructional time.

Second, teachers are responsible for many students with varied needs. This must be recognized in instruction, of course; but it also means that one aspect of a teacher's job must be "crowd control," since the academic progress of any student may be affected by other students' behavior. All students benefit when the prevailing norm is that schoolwork is taken seriously. But when many students are "off task" much of the time, the result may be perpetual distraction for almost everyone, especially those students whose attention is most easily diverted.

These "universal" constraints imposed on teachers need not imply a hopeless situation. Individual teachers, through well-planned and consistent management, can cope with many constraints and create a productive classroom environment (assuming some administration support). When this occurs, a basic skills program has a higher chance of success, because students actively encounter more of the content.

Essential Management Skills

The most important characteristics of effective classroom management, based on research in real classrooms, are summarized below.* Most of this research was conducted in elementary classrooms, but recent work on management in junior high schools (Emmer and Evertson, 1980) suggests that the general principles apply there as well, although specific procedures, of course, vary.

One useful way to organize thinking about management is to consider what teachers must do *before* instruction (preventive management) as well as what must be done *during* instruction (maintenance management).

Preventive Management. A recurring theme in management research is the value of preventing behavior problems through the initial establishment of an orderly and predictable classroom (see, for example, the review by Brophy and Putnam, 1979). When management problems are prevented, they do not consume valuable instructional time.

Teachers who are successful at preventing problems begin by carefully teaching students procedures and rules. This instruction is best given at the beginning of the school year (Emmer, Evertson, and Anderson, 1980; Evertson and Anderson, 1979). Procedures cover routine situations such as transitions to and from the room and within the room, sharpening pencils and getting supplies, getting teacher assistance, when and how to attend to the teacher, collecting and returning assigned work, and attending to personal needs (bathroom, water, coats, and so on). Rules establish appropriate activity and noise levels. Effective managers enforce and maintain rules and procedures through frequent feedback to the students about their behavior.

With early establishment of rules and procedures, students learn how to behave in ways that support learning. The objective is *not* peace and quiet for its own sake, but a productive work environment. One reason that the students in classroom B had more time engaged in learning activities is that they followed several time-saving routines (such as getting supplies ready and holding questions until all information was presented). They also knew the acceptable noise and activity levels. As a result, *each* student had a better chance of benefiting from instruction and practice.

With early establishment of rules and procedures, students learn how to behave in ways that support learning. The objective is not peace and quiet for its own sake, but a productive work environment.

In addition to teaching students appropriate behavior, the teacher who is skilled at preventive management also makes sure that the work assigned to students is challenging enough to be interesting but not so difficult as to be frustrating. Satisfying after-work options must be available. Clearly, one requirement for good management is good instruction that provides the students with appealing alternatives to "off task" behavior.

Maintenance Management. After rules and procedures are clearly established and students have been provided with appropriate learning activities, the teacher continues to play the manager's role by regular monitoring and supervision. This is important for two reasons. First, credibility with students is maintained only if the teacher consistently informs the class through his or her actions that "I meant what I said." Second, regular monitoring reveals when the teacher needs to adjust the flow of activities to prevent problems that might arise from confusion or distraction. Sometimes this necessary adjustment is instructional; sometimes it involves corrections for misbehavior or removal of distractions.

Instructional monitoring and subsequent adjustment involve many non-managerial skills that are beyond the scope of this paper. However, one important management task is to ensure that time is set aside and procedures are worked out to allow the teacher to pursue instructional monitoring. Better managers systematically review students' work during the day. It is profitable to do this regularly when students are working independently. Teachers who organize small groups may take advantage of transitions between groups (or short stretches of independent work in the small groups) to circulate among other students. Frequent teacher contact ensures that each student is "on the right track." This is especially important for students whose independent work skills or basic skills are not strong.

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*For more information on specific points, consult Anderson, Evertson, and Brophy, 1979; Anderson, Evertson, and Emmer, 1980; Brophy and Evertson, 1976; Brophy and Putnam, 1979; Emmer, Evertson, and Anderson, 1980; Evertson and Anderson, 1979; Good and Brophy, 1978; Good and Grouws, 1979; and Kounin, 1970.

One advantage to regular instructional monitoring may be that students gain a greater sense of accountability, which may in turn increase their motivation to stay on task. Teachers can increase this sense of accountability by regularly returning work to students quickly or otherwise providing feedback on progress. Again, this essentially instructional task is more easily accomplished when the teacher, as a manager, schedules time and establishes routines to accomplish it.

Behavioral monitoring is performed continuously by better managers. A term commonly used to describe teachers who are aware of their students' behavior is "with-it-ness" (Kounin, 1970). The "with-it" teacher frequently scans the room, making sure that students are purposefully occupied. The great advantage to frequent scanning is that many potential disruptions can be stopped before they become problems (that is, before there is a ripple effect). A less "with-it" teacher notices a disturbance only after it has gone so far as to distract several students. Effective managers learn to overlap their attention so that they can carry on instruction and monitor behavior at the same time (Kounin, 1970).

The teachers described in the above anecdotes differ greatly in their attention to both preventive and maintenance management strategies. In classroom A many problems arose because time-saving routines had not been established. These problems were compounded by teacher failure to provide either instructional or behavioral monitoring. Teacher B was more successful in all these aspects of management, as reflected in the students' "time on task."

These research findings reflect a systematic verification of many teachers' own theories about how to manage classrooms. The value of the research is in the compiling and organizing of important principles and the documentation that these teacher skills do indeed relate to student achievement in basic skills.

Implementation of these management principles depends on the type of classroom, the skills and needs of the students, and the instructional objectives. Specific management routines that work best in an open classroom where language experiences are encouraged will not work best in a traditional classroom where a highly structured skills-based program is in place. What works to encourage good behavior in first-graders will not work with sixth-graders. However, in all cases it is critical that the underlying management support the instructional goals, promoting time on the tasks that have been determined to be important.

Implications for Decision Makers

Staff Development. It is not enough to define basic learning skills, select a program, and then assume that student achievement will result if the appropriate curriculum has been mandated. Think about how successful that program is likely to be if teachers find it difficult to manage.

Many teachers are excellent classroom managers who work very hard to ensure that students learn the curriculum content; others are not. Often, providing poor classroom managers with new instructional objectives and curricula without also providing them with management training is to doom them — and the new program — to failure.

Administrative Support. Recognizing the importance of management may lead to adaptations in instructional programs. For example, any program that requires that the teacher spend long periods concentrating on individuals will succeed only if some assistance is provided for monitoring the other students. If these duties are given to an aide, then he or she should be carefully trained.

Other administrative support is necessary to ensure that teachers do not have to use much classroom time to deal with out-of-class issues. For example, the teacher in classroom B would not have been able to use time so effectively if she had to monitor many children during lunch or was delayed by a fight in the lunchroom or by a misplaced lunch box. Teachers must receive a loud and clear message from administrators that their efforts toward efficient use of instructional time are not only appreciated but actively supported.

Program Evaluation. In judging the success of any basic skills program — either present efforts or proposed changes — consider whether results are attributable to the content of the programs or their implementation in classrooms. That is, if student scores are not as high as expected, consider that, at least in some classes, students might not spend their learning time effectively. This means that evaluation designs must include data collection on what actually happens in classrooms.

References

Anderson, L.; Evertson, C.; and Brophy, J. "An Experimental Study of Effective Teaching in First-Grade Reading Groups." *Elementary School Journal* 79 (1979): 193-223.

Anderson, L., Evertson, C.; and Emmer, E. "Dimensions of Classroom Management Derived from Recent Research." *Journal of Curriculum Studies* 17 (1980): 343-356.

Brophy, J. "Teacher Behavior and Student Learning." *Educational Leadership* 37 (1979): 33-38.

Brophy, J., and Evertson, C. *Learning from Teaching: A Developmental Perspective.* Boston, Massachusetts: Allyn and Bacon, Inc., 1976.

Brophy, J., and Putnam, J. "Classroom Management in the Elementary Grades: A Literature Review." In *Classroom Management, Seventy-Eighth Yearbook of the National Society for the Study of Education*, edited by D. Duke. Chicago, Illinois: University of Chicago Press, 1979.

Denham, C., and Lieberman, A., eds. *Time to Learn.* Washington, D.C.: National Institute of Education, 1980.

Emmer, E., and Evertson, C. "Effective Management at the Beginning of the Year in Junior High School Classrooms." Paper presented at the Annual Meeting of the American Educational Research Association, Boston, April 1980.

Emmer, E.; Evertson, C.; and Anderson, L. "Effective Classroom Management at the Beginning of the School Year." *Elementary School Journal* 80 (1980): 219-231.

Evertson, C., and Anderson, L. "Beginning School." *Educational Horizons* 57 (1979): 164-168.

Good, T. "Teacher Effectiveness in the Elementary School." *Journal of Teacher Education* 30 (1979): 52-64.

Good, T.; Biddle, B.; and Brophy, J. *Teachers Make a Difference.* New York: Holt, Rinehart, and Winston, 1975.

Good, T., and Brophy, J. *Looking in Classrooms*, 2nd ed. New York: Holt, Rinehart, and Winston, 1978.

Good, T., and Grouws, D. "The Missouri Mathematics Effectiveness Project: An Experimental Study in Fourth-Grade Classrooms." *Journal of Educational Psychology* 71 (1979): 355-362.

Kounin, J. *Discipline and Group Management in Classrooms.* New York: Holt, Rinehart, and Winston, 1970.

Rosenshine, B. V., and Berliner, D. C. "Academic Engaged Time." *British Journal of Teacher Education* 4 (1978): 3-16.

Source: 1 Basic Skills Issues and Choices   Issues in Basic Skills Planning and Instruction by Reed, L. and Ward, S. (Ed). St. Louis, Missouri: CEMREL, Inc., 1982 (published under contract with the Basic Skills Improvement Program, U.S. Department of Education, Washington, D.C.).

Learning in Real-Life Contexts

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Editors' Note: *One approach to coordination of instruction so that two or more basic skills are taught together is to arrange instruction around problem-solving situations. Such situations often also require learning science or social studies concepts. In this paper Betty Beck describes the development and use of curriculum focused around the solving of realistic problems. She discusses outcomes and some of the issues associated with initiating such coordinated instruction.*

In 1967 a group of highly respected educators, mathematicians, and scientists met in Cambridge, Massachusetts, to consider the possibility of integrating mathematics and science instruction in the elementary school. Participants stressed the importance of instruction that is relevant to the child's interests and needs:

> In applying the . . . "scientific method" to interesting situations in everyday life, one may hope to remove some of the academic flavor of mathematics and science. The use of everyday situations may encourage children who resist abstraction or are impatient to see the relevance of what they are learning. . . . An integrated mathematics-science program should tend to make it feasible to have every child get most of his practice in arithmetic through handling numbers in which he has a real interest, that is, numbers which he has found in his own experimentation. (Cambridge Conference, 1969, pp. 30,13)

As a result of this conference, the National Science Foundation supported the documentation and evaluation of classroom use of the scientific method to solve students' everyday problems. This type of instruction became known as real-problem solving.

In the mid-1970s parent and community groups began demanding a greater stress on mathematics and language arts skills in the schools. Professional educators were concerned, because they also saw the need for continued emphasis on inquiry skills — skills that enable students to think critically and solve problems. The evaluation of real-problem-solving classes has shown that there is more effective learning of both mathematics and language arts skills and inquiry skills when students learn them together by dealing with real problems. This paper will elaborate on real-problem solving, indicate how mathematics and language arts skills, as well as inquiry skills, are learned within the context of working on real problems, describe the evaluation studies which have been completed, and suggest ways that real-problem solving can be included in the school program.

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*I wish to express appreciation to Earle L. Lomon and others who contributed to the development and refinement of these ideas.

Real-Problem Solving

Problem solving means different things to different people. For some, problem solving means finding solutions to the word problems found in most textbooks. For others, problem solving means working on hypothetical problems that may never really happen in real life or on problems presented as case studies that have no direct relation to students' lives.

Real-problem solving as described in this paper means student involvement in school or community situations they would like to see changed, for example, the school lunch program (students dislike the food, have to wait in line too long, or think the lunchroom is too crowded), traffic near the school, or theft or vandalism in the school. Working on such problems is highly motivational and requires a wide range of inquiry skills: defining the problem, deciding on avenues of investigation, collecting and analyzing data, communicating and making decisions, evaluating possible solutions, and implementing the chosen solution. This long-term process utilizes a wide variety of mathematics and language arts skills — skills that can be learned and practiced repeatedly as the students move from stage to stage within the process.

Dr. Robert Gagné defines cognitive skills as "the internal controls which make [the student] an efficient learner, an efficient 'rememberer,' an ingenious problem-solver." He states that these cognitive skills "are not learned quickly. . . Instead, they probably undergo continued refinement and sharpening as the individual acquires greater experience . . . [A] teacher . . . must provide many opportunities throughout the course of instruction for [the student] to encounter, formulate and solve problems of many varieties" (Gagné, 1971, p. 522).

Real-problem solving has been used successfully at all age levels (Unified Sciences and Mathematics for Elementary Schools [USMES] Curriculum, 1976-1977). The students, not the teacher, choose the problem to be tackled, decide what factors need to be investigated, search out the facts, try out possible solutions, and judge the effectiveness of their results. Primary-grade students may work on problems such as finding the best way to the school library, the best way to pass out supplies or assign jobs in the classroom, or what animals can be kept successfully in the classroom. The type of investigations and the level at which they are carried out varies with the children's age and abilities. Likewise, solutions that are acceptable to the students vary with the sophistication of the students.

Skills Involved in Real-Problem Solving

Table 1 describes activities that may occur as students work on one or more aspects of a school lunchroom problem (USMES Curriculum, 1976), along with the inquiry skills and the mathematics and language arts skills learned and practiced during these activities. Not all classes will participate in all of the activities listed — the students decide which aspects of the problem are important to them and collect information only on those aspects.

The teacher facilitates the real-problem-solving process by providing time for discussion and small-group investigations, by asking questions to stimulate students' thinking and encourage comprehensive work, and by teaching specific skills as they are needed. The teacher also makes written resources available to help students with data collection and analysis (USMES Curriculum, 1977). In addition, people from the community can be asked to help the students with their work. In this example the school dietician, health organization personnel, architects, and others could be contacted.

Real-Problem-Solving Evaluation

The evaluation of real-problem-solving classes has focused on three areas: subject area skills, problem-solving processes, and student attitudes. The evaluation reported on here was carried out by groups at Boston University, the University of Minnesota, Michigan State University, and the staff of the USMES Curriculum project.

Subject area skills. Studies by evaluation teams from Boston University were based on pretest and posttest scores on a standardized test. In 1972-73 and 1973-74, comparisons on the Stanford reading comprehension and

Table 1. School lunchroom problem.

Activity	Inquiry Skills
In the initial session, students identify possible important aspects of the lunchroom problem (unpopular food, crowded tables, too long a wait in line, litter, etc.). Session may be repeated after observations and/or student questionnaire.	Identifying and defining the problem (LA, S, SS)
Classes may decide they need to find out what foods students prefer, what the state nutritional requirements are, how long students wait in line, scheduling of classes in lunchroom, etc.	Deciding on information and investigations needed (LA, S, SS)
Classes may be split into small groups to design and carry out the various tasks. As the groups report their progress to the class, students may see the need for new information (what foods are thrown out, nutritional value of different foods, measurements for a scale drawing of the lunchroom).	Organizing to obtain needed information (LA, M, S, SS)
Investigations carried out: (1) design and administration of student surveys, (2) interviews with dietician and lunchroom personnel, (3) research into nutritional values of foods, (4) interviews with principal, (5) measurement of waiting times, dimensions of room, tables, benches, etc., (6) counting of portions of different foods thrown out, litter on floor.	Questionnaire design (LA) Sample determination (M, SS) Interviewing (LA) Research (LA, S) Procedures design (S) Measuring (M, S) Counting, addition, subtraction, multiplication (M)
Data analyzed and reported to class: (1) bar graphs made and percentages calculated from data on surveys, food wasted, (2) histograms made and medians calculated of timing data, (3) interview and research data organized, (4) scale map made of lunchroom.	Graphing (M, S) Percentage calculation (M) Statistics (M) Organizing and reporting (LA) Geometry (M) Inference (M, S, SS)
After discussion, classes may present reports and recommend changes in food, lunchroom arrangement, or scheduling to the principal and obtain permission for a trial of proposed changes.	Report writing (LA) Communicating (LA) Setting up trials (S, SS) Data collection and analysis (M, S, SS)

LA, language arts; M, mathematics; S, science; SS, social science.

mathematics computation subtests were made between classes with real-problem-solving experience and classes with no experience. The 1973-74 results showed that most of the real-problem-solving classes attained somewhat higher posttest mean scores, adjusted for pretest differences, in both the reading and mathematics subtests (Shann, 1975). The 1974-75 testing included six subtests: reading comprehension, mathematics computation, mathematics application, mathematics concepts, science, and social science. On all six posttest measures the overall real-problem-solving class mean was higher than the overall control mean. Although these overall differences were small, the trend favored the real-problem-solving classes. In addition, the report on the 1974-75 testing points to an especially noteworthy trend "favoring real-problem-solving classes in the seventh and eighth grades. While the real-problem-solving group exhibited continued growth in each of the six subtest areas, the control group exhibited less growth or even showed a decline in performance" (Shann et al., 1975, p. 124).

Three other types of basic skills investigations in real-problem solving were made. At Michigan State University a nine-week in-depth study was made of every mathematical topic arising in four classes working on four different problems. It was found that almost every mathematics skill that could be associated with elementary school came up in the real-problem-solving context and that many came up frequently (Krairojananan, 1973). A study at the University of Minnesota compared students' knowledge of basic economics according to four treatment groups: real-problem solving, contrived-problem solving, discussion/workbook, and control. At the conclusion of four weeks, the Test of Elementary Economics was given to each group. Students in the two problem-solving groups had significantly (p .05) higher scores than the other two groups, with the real-problem-solving group higher than the contrived-problem-solving group (Ellis and Glenn, 1977).

The final investigation of subject area skills was based on data collected in 1976 from fifty teachers in thirty-two communities. These teachers recorded which skills were learned in each real-problem-solving session. When grouped into categories, the results were as follows: 67.1 percent of the sessions employed mathematics skills; 65.9 percent employed language arts skills; 62.3 percent employed social science skills; and 48 percent employed science skills. Correlations were made between sessions offering exercise in subject area skills and the inquiry processes being used. Ten problem-solving processes were divided into three categories:

1. Discussion
    - a. Identifying and defining the problem
    - b. Deciding on information and investigations needed
    - c. Determining what needs to be done first
    - d. Deciding on the best way to obtain the information needed
2. Investigation
    - a. Carrying out the data collection procedures
    - b. Detecting flaws in the data-gathering process or errors in the data
    - c. Organizing, analyzing, and interpreting the data
    - d. Suggesting possible solutions based on the data collected
    - e. Trying out various solutions and evaluating the results
3. Implementation
    - a. Working to implement the solution decided on by the class

In this study two issues were investigated:

1. *How much* is the probability of instruction in each of the four skill categories increased or decreased in the presence of each of the ten problem-solving processes?
2. What is the probability ... that this increase or decrease shows up ... as a result of chance alone? (Education Development Center, 1978a, p. 32)

It was found that instruction in each of the subject area skills was more likely (an increase) in sessions focused on some problem-solving processes and less likely (a decrease) in sessions focused on other problem-solving processes. For each of the ten problem-solving processes, however, there was a net gain in basic skills instruction. "One of the most striking features is the strong effect ... which investigative processes seem to have on mathematical instruction" (Education Development Center, 1978a, p. 34).

Problem-solving processes. A unique approach to examining problem-solving-process ability is the situational test developed by Dr. Bernard Shapiro of Boston University. A small but real problem involving choice of variables, observation, and decision making is given to one or more subjects at a time. The subjects are observed while they are dealing with the problem. Then they are asked some structured questions. Because each test administration can take no more than one-half hour, subjects' persistence and refinement of procedures are not measured. In the first situational test, the *Notebook Problem*, a student is given three notebooks with differing numbers and sizes of pages, quality of paper, color, and price and is asked to recommend the best for quantity purchase by the school. Pens, pencils, erasers, and a ruler are available to the student, and the price is stamped on each notebook. The process variables tested are whether the student used (1) measurable or nonmeasurable reasons for selection or (2) opinion, suggested tests, or actual tests. The test was administered separately by Boston University staff in 1971-72 (Shapiro, 1974) and by University of Minnesota staff in 1976 (Ellis and Glenn, 1977). The Boston University test sample consisted of students in fifty-three classes from grades two through six in seven school districts, which were chosen for variety in socioeconomic conditions and geographic locations. The University of Minnesota sample was limited to one school district.

Both groups found that the number of objectively measurable reasons given for selecting a particular notebook increased significantly after students had had experience working on real problems. The Boston University report concludes, "it would appear that in terms of the two independent variables studied, the [real-problem solving] experience had, irrespective of problems or teachers involved, a marked and positive effect on students' problem-solving behavior" (Shapiro, 1974, p. 13).

. . . the ideal role for real-problem solving in the school is a combination of two emphases: real-problem solving can be used for both development of the ability to apply quantitative skills and development of student responsibility and initiative.

The *Pencil Problem*, a variant of the Notebook Problem, was administered by the USMES Curriculum project staff in 1976-77. The problem involved having students recommend to a principal which of six national brands of pencils should be purchased. Four schools of different size, geographic location, and racial/ethnic composition were chosen for extensive study. Because of time and budget constraints, the Pencil Problem was administered only once, near the end of the school year. The test was given to groups of three students each, randomly picked from classes in the same school according to whether the students had engaged in real-problem solving. On three outcomes (number of factors considered, number of investigations carried out, and reason used to convince others) students who had worked on real problems did better than those with no experience (Education Development Center, 1978b).

Two other types of evidence collected by Boston University staff bear on problem-solving process attainment. When an instrument to measure types of student-teacher and student-student interaction was administered, the results showed that in real-problem-solving classes students suggested many more ideas and changed the subject or made random comments many fewer times than in control classes. The second kind of evidence resulted from analyses of classroom activities; results showed more small-group work and group changes in real-problem-solving classes than in control classes (Shapiro, 1972).

Student attitude. The evaluation of student attitude offers evidence of the motivational aspect of real-problem solving. This was investigated three times: in 1972-73 with 900 students in Lansing, Michigan; in 1974-75 with 85 students in Edina, Minnesota; and in 1976-77 with 600 students in four schools in different geographic and socioeconomic situations. The results are significant in their similarity. A large majority of students (92% to 98%) thought that real-problem solving was fun, few (4% to 12.5%) found it boring, about half (45% to 53%) thought that real-problem solving was hard work.

In another part of the 1976-77 study, a longer questionnaire was administered to students in both real-problem solving and control classes. The questionnaire focused on attitudes toward (1) working on real problems and producing effective solutions, (2) group interaction, and (3) specific problem-solving activities. In all three categories students with over twenty real-problem-solving class sessions were more positive in their attitudes than other students (Education Development Center, 1978b).

Real-Problem Solving and the School Program

Much of the focus of the two 1976-77 studies was on four schools in different parts of the nation (Education Development Center, 1978a, 1978b). This in-depth examination revealed that the intelligent and enthusiastic support of the school principal is the most important requirement for the implementation of real-problem-solving work in a school. In addition, because the studies included the administration of a problem-solving instrument (the Pencil Problem), an evaluation of student attitudes, and a correlation of the skills learned with the problem-solving processes taking place, there is evidence that the role given to real-problem solving in the school curriculum affects the type of learning achieved.

In one large city school which used real-problem solving to complement a strong and highly structured basic skills program, students scored higher than average on quantitative problem-solving outcomes but lower than average on attitude outcomes. In contrast, in another large city school, which focused real-problem-solving work on the development of student responsibility and sense of school ownership, students scored higher than average on attitude outcomes and lower than average on quantitative problem-solving outcomes.

From these studies, it can be seen that the ideal role for real-problem solving in the school curriculum is a combination of two emphases: real-problem solving can be used for both development of the ability to apply quantitative skills and development of student responsibility and initiative.

Because real-problem solving is interdisciplinary, some adjustments in the time devoted to the traditional subject areas may be necessary in order to make real-problem solving an integral part of the school day. As much as one fourth to one third of the time normally spent on mathematics, language arts, science, and social science can be safely assigned to real-problem-solving activities, because of the large amount of both subject area skill and inquiry skill learning that takes place during these activities. In some schools this re-allotment of time has been successfully accomplished through team teaching. In other schools teachers in self-contained classrooms rearrange the normal schedule by themselves. Other teachers use back-to-back scheduling of classes to allow them to operate as a team for teaching real-problem-solving activities.

In a survey of 160 teachers who had real-problem solving as an instructional strategy, 54 percent of the teachers felt that real-problem solving was a useful support for the mathematics program, 57 percent felt that it provided useful support for the social science program, 74 percent felt that it enhanced the science program, and 43 percent found it useful in the language arts program. The survey also showed that 68 percent of the teachers used real-problem solving as part of more than one subject, and 56 percent used it for more than two subjects.

For real-problem solving to have an optimal value in the school program, content scheduling in the various subject areas should be done with reason and forethought. Because all activities in real-problem solving are initiated by students in response to the problem, it is difficult to state unequivocally what activities will take place and what skills will be learned. However, lists are available of activities that have been used to solve many specific problems (Shapiro, 1972).

Initiating Real-Problem Solving

Real-problem solving requires different teaching strategies from those used for many traditional learning modes. The teacher acts as a coordinator rather than an activities director. This requires flexibility, good questioning techniques to encourage good problem-solving processes, and the ability to work with several small groups of students, each of which may be working on a different aspect of a problem. These strategies come naturally to teachers whose classes have been involved in student-directed projects. All that is needed is an overview of the basic philosophy of real-problem solving, discussion of real-problem-solving strategies that have worked well for other teachers, and a review of the available resources. Other teachers can obtain firsthand experience with real-problem solving through inservice workshops provided by education departments in many universities. Whether teachers attend inservice workshops or not, it is important that they meet regularly to discuss difficulties they are having and to share their successes.

Conclusion

Learning in real-life contexts — real-problem solving — offers students the opportunity to develop inquiry skills while learning and applying mathematics and language arts skills. The first real-problem-solving project is not easy — the classwork is not as structured as most other work, and specific skills are not taught according to a time schedule. But the results are well worth the effort and, with the support of the school principal and the community, much can be accomplished.

References

Cambridge Conference on the Correlation of Science and Mathematics in the Schools. *Goals for the Correlation of Elementary Science and Mathematics.* Boston: Houghton Mifflin, 1969.

Education Development Center, Inc. *The USMES School Study.* Newton, Massachusetts, 1978a.

Education Development Center, Inc. *The USMES Student Study.* Newton, Massachusetts, 1978b.

Ellis, A., and Glenn, A. *Effects of Real and Contrived Problem Solving on Economic Learning.* Minneapolis: University of Minnesota, 1977.

Gagné, R.M. "Instruction Based on Research in Learning." *Engineering Education* 61 (1971): 522.

Krairojananan, Sompop. *The Mathematical Behaviors Derivable from the Program of USMES.* East Lansing, Michigan: Michigan State University, 1973.

Shann, M.H. *An Evaluation of Unified Science and Mathematics (USMES) During the 1973-74 School Year.* Boston: Boston University, 1975.

Shann, M.H.; Beale, N.C.; Bender, H.; Aiello, T.; and Herek, L. *Student Effects of an Interdisciplinary Curriculum for Real Problem Solving: 1974-75 USMES Evaluation.* Boston: Boston University, 1975.

Shapiro, B. *The Notebook Problem: Report on Observation of Problem Solving Activity in USMES and Control Classrooms.* Boston: Boston University, 1974.

Shapiro, B. *Report on Classroom Structure and Interaction Patterns,* Newton, Massachusetts: Education Development Center, Inc., 1972.

Unified Sciences and Mathematics for Elementary Schools (USMES) Curriculum. *Teacher Resource Books.* Durham, North Carolina: Moore Publishing Co., 1976-77.

USMES Curriculum. *Eating in School: A Teacher Resource Book.* Durham, North Carolina: Moore Publishing Co., 1976.

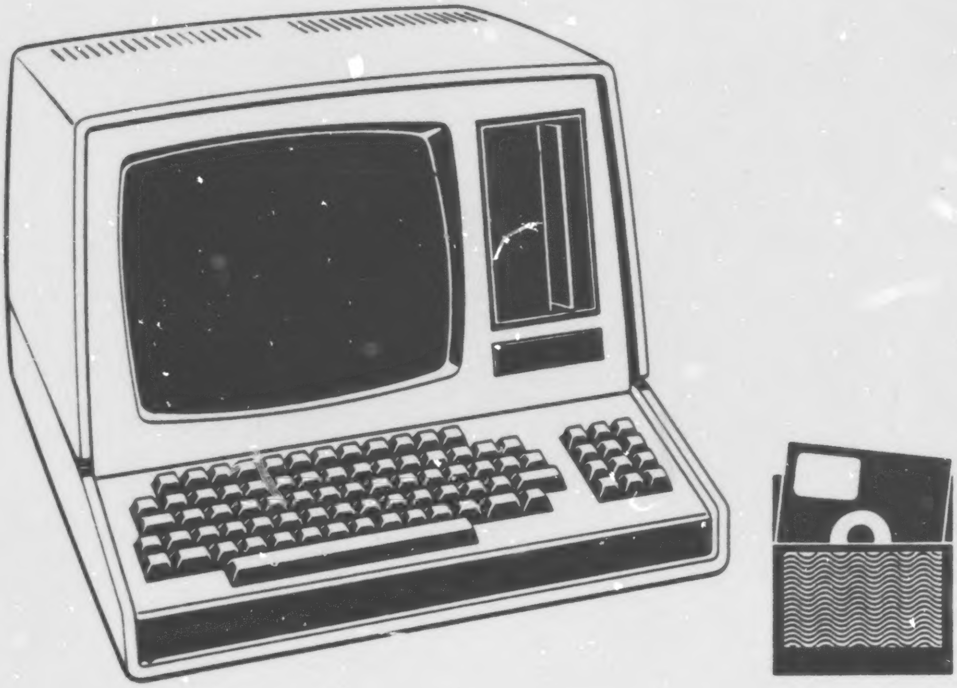
USMES Curriculum. *How To Booklets.* Durham, North Carolina: Moore Publishing Co., 1977.

MICROCOMPUTERS AND BASIC SKILLS INSTRUCTION

MICROCOMPUTERS

for

ABE / GED / BASIC SKILL INSTRUCTION



Fall, 1981

North Central Technical Institute
Wausau, Wisconsin

INTRODUCTION

This booklet was assembled to give you information concerning the 310 project, "Microcomputer Instruction for GOAL/ABE," at North Central Technical Institute in Wausau, Wisconsin. The booklet further covers information which may be helpful to you in learning about microcomputer instruction, implementing microcomputer instruction, and/or comparing microcomputer instruction to instruction using a mini or mainframe computer.

Although we are still at the learning stage in the use of the microcomputer, the experience has been most positive. Both instructors and students have found using the computers very motivational.

One of the stimulating effects of implementing the use of microcomputers for basic skills is finding the willingness of other educators to share information and materials. It is also very exciting to be on the cutting edge of growing educational technology.

If you would like further information on our project, please feel free to contact me.

Lois Gilliland
Career Development Supervisor
1000 Schofield Avenue
Wausau, WI 54401

Telephone: (715) 675-3331

Implementation of Microcomputer Instruction ABE/GED/GOAL

The following steps indicate actions that have been completed or will be completed to implement microcomputer instruction in the GOAL Learning Center at North Central Technical Institute.

Step I. Selection of hardware (equipment)

A. Acquiring information

1. Read current literature (See Appendix C)
2. Visit other educational agencies
3. Visit a computer store
4. Observe demonstrations
5. Contact vendors or visit displays
6. Consult computer experts

B. Considerations in purchasing hardware

1. Use of the computer
    a. Computer assisted instruction (CAI)
    b. Computer programming
    c. Computer literacy
    d. Data processing
2. Criteria for selection
    a. Durability and dependability
    b. Memory needed
    c. Software available
    d. Type of equipment
    e. Ease of use
    f. Portability

g. Price

3. Hardware available

a. Input devices

Keyboard - Apple, Atari, Commodore,
Texas Instruments, TRS-80

b. Memory (Storage)

(1) Disk Drive

(2) Tape recorder

c. Output devices

(1) Display screen (TV or monitor)

(2) Printer

Step II. Purchasing of hardware

A. Bidding process

B. Considerations in bid selection

1. Price

2. Service available

3. Extended warranty

4. Inservice and setup

Step III. Selection of software programs

A. Acquiring information

1. Review educational catalogs

2. Preview programs

3. Contact sales persons

4. Attend conferences

5. Contact other educational agencies

B. Considerations in purchasing software

1. Use of the software

    - a. Drill and practice
    - b. Tutorial
    - c. Simulation
    - d. Computer managed instruction (CMI)
    - e. Data retrieval
    - f. Problem solving
    - g. Self contained or supplementary
- 2. Criteria for selection
    - a. Clarity of directions
    - b. Student interaction
    - c. Ease of use
    - d. Appropriateness for adults
    - e. Clarity of software documentation
    - f. Quality of graphics
    - g. Format
        - (1) Physical - diskette or cassette
        - (2) Esthetic - Uncluttered, readable
    - h. Organization
        - (1) Sequence
        - (2) Management
        - (3) Software available
            - a. Type
                - (1) Subject areas - Mathematics, English, reading, spelling, career development coping skills, and computer literacy

        (2) Miscellaneous - Programming, statistical, labeling, word processing, and administration
    b. Companies distributing
        (1) Borg Warner
        (2) SRA
        (3) Westinghouse Learning Corporation
        (4) Marck
        (5) Educational Activities, Inc.
        (6) Interpretive Education
        (7) Apple
        (8) Atari

Step IV Implementation in the GOAL Learning Center

A. Instructor inservice
    1. Machine use by dealer
    2. Overview of computer in education by educational consultant
    3. Self instruction by printed materials, computer programs, and hands-on practice.
    4. Classes in programming, basic language, educational use, etc.

B. Logistics in use
    1. Location
        a. Separate facility
        b. Integrated in learning center
    2. Staffing
        a. Regular GOAL instructors

b. Additional technician

c. Programmer

C. Instruction of students in computer use.

1. Physical use

a. Operation of the computer

b. Directions for using software

2. Curriculum integration

a. Supplementary

b. Individualized

c. Small group

D. Evaluation

1. Methods

a. Comparison of student growth

b. Survey of student opinions

c. Observation of student attitudes

2. Advantages of computer assisted instruction (CAI)

a. Individualization of learning

b. Immediate feedback of student responses

c. Provision for remedial and advanced instructional material

d. Opportunity to make education more productive

e. Increase in the percent of one to one communication

f. Prestige effect for remedial student.

g. Motivational characteristics

Step V Planning and implementation of further activities

A. Preview and acquire more software

B. Program materials for special needs

C. Implement more computer-managed instruction

    1. Diagnosis
    2. Prescription
    3. Assessment

D. Implement GOAL Learning Center management program

    1. Student records
    2. Student attendance
    3. Statistical data

E. Implement word processing functions

    1. Labels
    2. Correspondence
    3. Reports

F. Disseminate results

    1. Annotated bibliography of software
    2. Presentations

APPENDIX A

Microcomputer Hardware at NCTI

Software at NCTI

Microcomputer Hardware at

NORTH CENTRAL TECHNICAL INSTITUTE

June 30, 1981

3 Apple Computers - 48K

3 Apple Disk Drives

2 Atari Computers - 32K

2 Atari Disk Drives

1 Atari Recorder

3 Sanyo Monitors

2 Sony Televisions

1 Epson Printer

Software at
NORTH CENTRAL TECHNICAL INSTITUTE

Mathematics

Science Research Associates
155 North Wacker Drive
Chicago, Illinois 60606

*1. SRA Computer Drill and Instruction Managed Version Level B for Atari

*2. SRA Computer Drill and Instruction Managed Version Level C for Apple

3. SRA Computer Drill and Instruction Fact Track

4. SRA Computer Drill and Instruction Set 1 (2 games)

Atari Software (Manufactured by Atari)

5. Basic Algebra

Westinghouse Learning Corporation
5005 West 110th Street
Oak Lawn, Illinois 60453

6. Compu - Math - Fractions

English

Atari Software (Manufactured by Atari)

1. Effective Writing

Marck
280 Linden Avenue
Branford, CT 06082

2. Nouns (PD 21) (Apple)
3. English Grammar Gr. 1 through 12 (Apple)
4. Working with Synonyms/Antonyms (Apple
5. Working with Adjectives (Apple)
6. Working with Adverbs (Apple
7. Working with Contractions/Homonyms (Apple

8. Working with Subjects/Nouns (Apple)
9. Working with Pronouns/Prepositions (Apple)
10. Working with Verbs (Apple)

Educational Activities, Inc.
P. O. Box 392
Freeport, New York 11520

11. Program 1 - Parts of Speech (Apple)
12. Program 2 - Concepts in Language Arts (Apple)

Spelling

Educational Activities, Inc.
P. O. Box 392
Freeport, New York 11520

1. Spell - Scrambled Letters and Flash Spelling (Apple)

Marck
280 Linden Avenue
Branford, CT 06082

2. Spell (Gr 1 through 8) (Apple)

MEEC Publication
2520 Broadway Dr.
St. Paul, Minnesota 55113

3. Spelling - Special Needs, Vol. 1 (Apple)

Atari Software (Manufactured by Atari)

4. Spelling (Atari)

Westinghouse Learning Corporation
5005 West 110th St.
Oak Lawn, Illinois 60453

5. Spelling Builder (Apple)

Reading

Mark
280 Linden Avenue
Brandord, CT 06082

1. Reading Comprehension: What's Different (Atari)
2. Work Skills 1: Prefixes (Apple)
3. Word Skills 2: Prefixes (Apple)
4. Word Skills 3: Suffixes (Apple)

5. Word Meanings Apple
6. Vocabulary Builder: Beginning (Atari)
7. Vocabulary Builder 2: Advanced (Atari)
8. Analogies (Atari)

Borg Warner
600 West University Drive
Arlington Heights, Illinois 60004

*9. Critical Reading Lesson Series A-H
8 disks with management system and teacher's guide (Apple)

Westinghouse Learning Corp.
5005 West 110th Street
Oak Lawn, Illinois 60453

10. Compu-Read (Apple)

Science Research Associates
155 North Wacker Drive
Chicago, Illinois 60606

11. Phonics - Initial Consonants

Miscellaneous

Apple Software (Available at local store)

1. Apple Pilot (Special program for educational programming by teachers)

Interpretive Education
2306 Winters Drive
Kalamazoo, MI 49002

2. Income Meets Expenses (Apple)
3. Job Readiness - Assessment & Development (Apple)

Periodicals

Robert Purser's Software Directory
P. O. Box 466
El Dorado, California 95623

1. Robert Purser's Software Directory

Classroom Computer News
Box 266
Cambridge, Mass 02[illegible]

2. Classroom Computer News

Professor Dan Isaacson
Dept. of Inform. Systems
California State University
Fresno, California 93740

3. Courseware Magazines

Marck
280 Linden Avenue
Brandord, CT 06405

4. The Computing Teacher

In addition 5¼" blank diskettes are needed for copying and programming.

*Above average software

APPENDIX B

Short Glossary

Classifications of Computer Assisted Instruction

Implications of Nature of Use Upon Hardware Selection

Importance of Application Software Availability Quality for the Nature of Use

SHORT GLOSSARY

BASIC	Beginners All-Purpose Symbolic Instruction Code, most commonly used language by microcomputers and for programming by elementary and secondary students
bits	binary digits, 0 and 1
byte	a group of adjacent bits operated upon by the computer as a group (e.g. micros generally use 8-bit bytes)
cassette	a normal tape recorder cassette upon which a computer program can be stored
central processing unit (CPU)	the part of the computer system which controls the interpretation and execution of instructions
computer	a fast electronic symbol manipulating device that is able to follow an intellectual map*
computer-assisted instruction (CAI)	direct use of computer by students for drill, simulation, testing and teaching
computer literacy	the knowledge of computers and the skills in their use necessary for a person to operate in his/her environment
computer-managed instruction (CMI)	testing and reporting student progress by using the computer to grade tests, keep records and provide reports to teachers and other decision-makers (sometimes also includes diagnosing and prescribing)
courseware	instructional programs which teach, drill, test, provide information or allow students to manipulate data
cathode-ray tube (CRT)	a type of data terminal
data terminal	an input/output device usually with a keyboard and television-like screen
debugging	finding and removing errors in programs (or malfunctions in equipment)
disk	storage unit for courseware or software
diskette (floppy disk)	microcomputer storage unit for courseware or software
documentation	written information providing user with information about the program and how to use it (may be on computer)
hardware	physical equipment

Glossary

hardware	physical equipment
information	meaning assigned to data by people
information retrieval	ability to access specific information needed by user and available from large data based program (ERIC, New York Times)
instructional language	a computer programming language developed expressly for instruction containing e.g. instructions for processing correct and incorrect answers, registering students and keeping records
K	1,024 - example: 16K memory means approximately 16,000 bytes (8-bit bytes)
memory or storage	any device that can accept data, hold them and deliver them on demand
microcomputer	smallest category of computer, consisting of microprocessor, storage and input/output devices
modem or accoustical coupler	piece of equipment to connect computer or terminal to telephone; changes signals from analog to digital and vice-versa
nanosecond	one-billionth of a second
random access	storage devices where retrieval time is not affected by the location of data
RAM	memory which you can read from and write into
ROM	memory from which you can read only
response time	number of seconds (nanoseconds, seconds, minutes) for computer to respond to user
software	set of programs and routines associated with operation of a computer system
storage	see memory
timesharing	simultaneous use of computer in such a way as each person appears to have its exclusive use

CLASSIFICATIONS OF COMPUTER ASSISTED INSTRUCTION

Drill and Practice. This mode of computer-based instruction (CBI) operates on the assumption that the subject material contained in the lesson has been previously introduced to the student.

Tutorial. The tutorial mode may be an initial entry into a given topic. Often CBI-tutorial will also include elements of drill and practice mode.

Simulation. A computerized model that attempts to simulate a real life situation. In many instances the simulation may be a very accurate replication of the physical event, i.e., a chemical titration.

Computer-managed instruction (CMI). The computer is used to support the teacher in the instructional process: generation of tests, scoring; student record-keeping; reports.

Data Retrieval. Provides inquiry against collections of computer-banked data items. This form of CBI is exemplified in the usage of the many Guidance/ Occupational information Systems throughout the United States.

Problem Solving. The computer is used as a tool for exploration, investigation, clarification,....... . Often the user writes their own programs. Programs usually are centered around well defined algorithms.

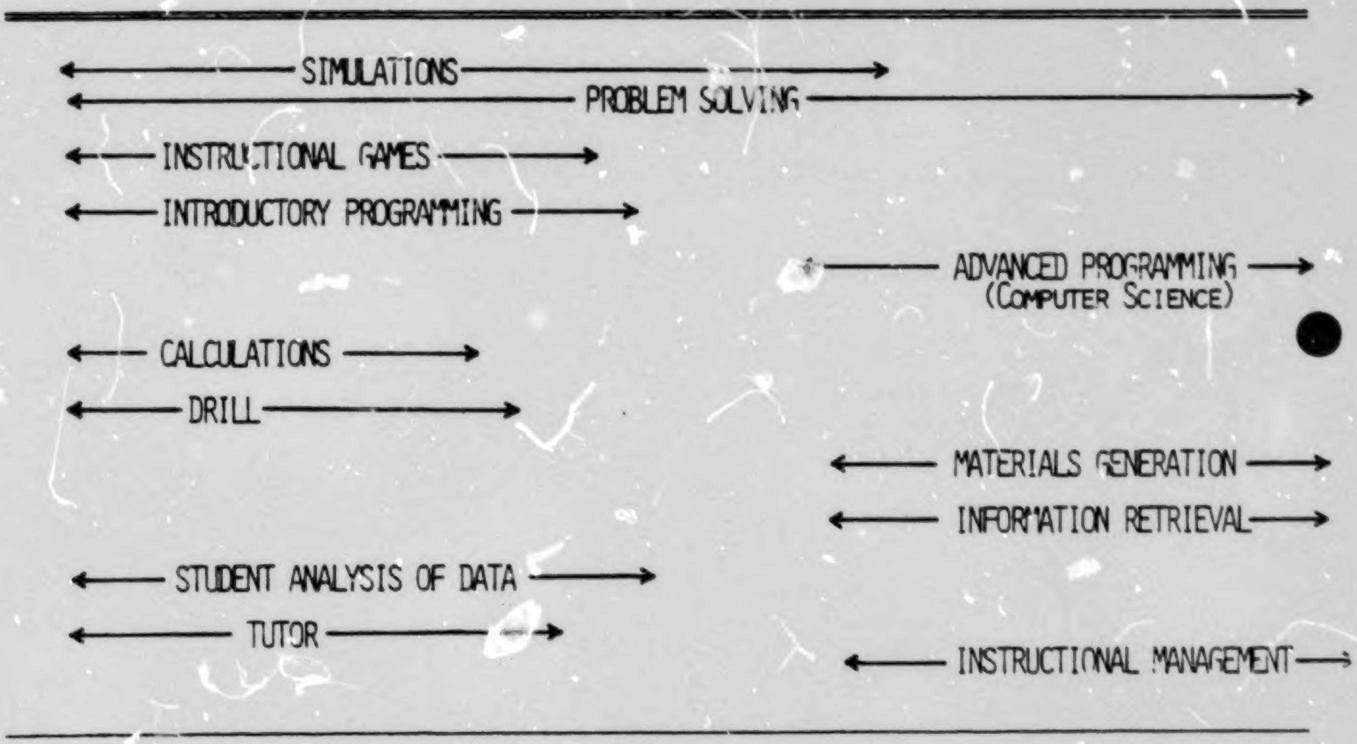
IMPLICATIONS OF NATURE OF USE UPON HARDWARE SELECTION

MINIMAL SYSTEM:

- 4K RAM
- CASSETTES
- VIDEO DISPLAY

FULL SYSTEM:

- 48K RAM
- DISK STORAGE
- VIDEO & HARDCOPY
- MULTIPLE INPUT MODES



SIMULATIONS

PROBLEM SOLVING

INSTRUCTIONAL GAMES

INTRODUCTORY PROGRAMMING

ADVANCED PROGRAMMING (COMPUTER SCIENCE)

CALCULATIONS

DRILL

MATERIALS GENERATION

INFORMATION RETRIEVAL

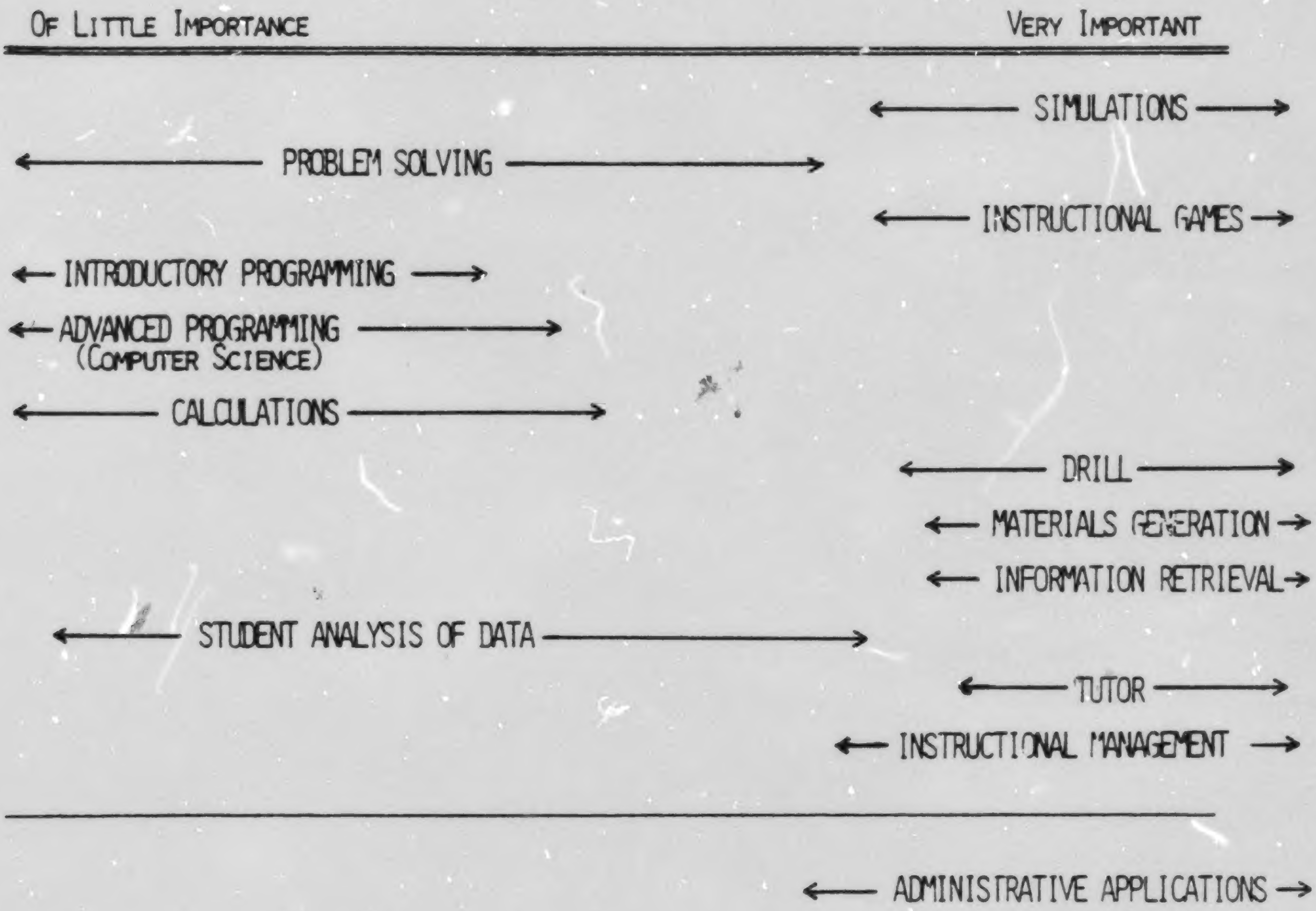
STUDENT ANALYSIS OF DATA

TUTOR

INSTRUCTIONAL MANAGEMENT

ADMINISTRATIVE APPLICATIONS

IMPORTANCE OF APPLICATION SOFTWARE AVAILABILITY QUALITY FOR THE NATURE OF USE


Of Little Importance
Very Important
SIMULATIONS
PROBLEM SOLVING
INSTRUCTIONAL GAMES
INTRODUCTORY PROGRAMMING
ADVANCED PROGRAMMING (COMPUTER SCIENCE)
CALCULATIONS
DRILL
MATERIALS GENERATION
INFORMATION RETRIEVAL
STUDENT ANALYSIS OF DATA
TUTOR
INSTRUCTIONAL MANAGEMENT
ADMINISTRATIVE APPLICATIONS

APPENDIX C

Sources of Software

Sources of Information

Professional Associations

Evaluation Forms

- Faculty
- Student

SOURCES OF SOFTWARE

Activity Resources, Inc., P. O. Box 4875, Hayward, California

Apple - Cations, Box 2235, Southfield, Michigan 48037

Borg Warner, 600 West University Drive, Arlington Heights, Illinois 60004

Creative Discount Software, 256 S. Robertson, Suite 2156, Beverly Hills, California 94306

Creative Computing Software, P. O. Box 789-M, Morristown, New Jersey 07960

Creative Publications, P. O. Box 10328, Palo Alto, California 94303

Educational Activities, Inc., P. O. Box 392, Freeport, New York 11520

Educational Software Directory, Sterling Swift Publishing Co., P. O. Box 188 Manchaca, Texas 78632

Edu-Soft, 4639 Spruce Street, Philadelphia, Pennsylvania 19139

Edutek Corporation, P. O. Box 11354, Palo Alto, California 94306

Edu-Ware, Inc., 22035 Burbank Blvd. #233, Woodland Hills, California 91367

Fullmer Associates, 1132 Via Jose, San Jose, California 95120

Interpretive Education, 2306 Winters Drive, Kalamazoo, MI 49002

MARCK, 280 Linden Avenue, Branford, CT 06082

MECC Publications, 2520 Broadway Drive, St. Paul, Minnesota 55113

Mentors Software, Inc., P. O. Box 791, Anoka, Minnesota 55303

Milliken Publishing Company, 1100 Research Blvd., St. Louis, Missouri 63132

Opportunities For Learning, Inc., 8959 Luline Ave., Chatsworth, CA 91311

Queue, 5 Chapel Hill Drive, Fairfield, CT 06432

Robert Purser's Quarterly Magazine, P. O. Box 466, El Dorado, CA 95623

School Microware, P.O. Box 246, Dresden, Maine 04342

Science Research Associates, 155 North Wacker Drive, Chicago, Illinois 60606

Sources of Software (continued)

Sheridan College, Microcomputer Software Catalog, Centre for Instructional Development, 1430 Trafalgar Rd., Oakville, Ontario, Canada - L6H2L1
Telephone: (416) 845-9430

SOFTSWAP, San Mateo County Office of Education, 333 Main Street, Redwood City, California 94063

Westinghouse Learning Corporation, 5005 West 110th Street, Oak Lawn, Illinois 60453

SOURCE OF INFORMATION

AEDS Journal, AEDS Monitor, AEDS Bulletin (AEDS) 1201 Sixteenth Street, N.W., Washington, D.A.

Classroom Computer News, Department of Information Systems, California State University, Fresno, California 93740

Communications of the ACM (ACM), 1000 Connecticut Avenue, N.W., Washington, D.C.

Computer Magazine, Box 5406, Greensborough, North Carolina 27403

Computerworlds, 375 Cochituate Road, Route 30, Framingham, MA 01701

Creative Computing, P.O. Box 780-M, Morristown, N.J. 07960

Journal of Computer - Based Instruction (ADCIS), Western Washington University, Bellingham, Washington 98225

Microcomputer Education Applications Network, 256 N. Washington Street, Falls Church, Virginia 22046

Recreational Computing, People's Computing Company, 1263 El Camino Real, Box 1, Menlo Park, CA 94025

Technological Horizons in Education Journal, P.O. Box 992, Acton, MA 01720

The Computing Teacher, c/o Computing Center, Eastern Oregon State College, La Grande, Oregon 97850

PROFESSIONAL ASSOCIATIONS

American Educational Research Association (AERA) SIGCAI, 1619 Massachusetts Avenue, N.E., Washington, D.C.

Association For Computing Machinery (ACM) SIGCSE, SIGCUE, SIGUCC, 1000 Connecticut Avenue, N.W., Washington, D.C.

Association For Educational Data Systems (AEDS), 1201 Sixteenth St., N.W., Washington, D.C.

Association For The Development Of Computer Based Instructional Systems (ADCIS) Western Washington University, Bellingham, Washington 98225

IEEE Computer Society, 1109 Spring St., Silver Spring, Maryland

COMPUTER QUESTIONNAIRE

(Faculty)

NAME______________________________ SUBJECT____________________

Supervisor__________________________ Date______________________

Computer Program Title__________________________

Direction: Please answer yes, no, does not apply (DNA) and comment whenever necessary.

1. Were directions clear? ________

2. Was the material sequenced properly? ________

3. Were there problems in getting the program up? ________

4. Did the students react favorably? ________

5. Was the material appropriate for adults? ________

6. Were the graphics clear and understandable? ________

7. Was the courseware documentation clearly stated? ________

8. Other comments.

COMPUTER QUESTIONNAIRE

(Student)

NAME: ______________________ DATE ______________________

1. What subjects did you work on? (check subjects)

Math _____ Reading _____ English _____ Careers _____

2. Did you like working with the computer? yes _____ no _____

3. How much have you learned by working with the computer?

A LOT _____ A LITTLE _____ NOTHING _____

4. Do you think computer learning is better than regular class instruction?

YES _____ NO _____ NO DIFFERENCE _____

5. What did you like most about the computer?

____

____

____

6. What did you like least about the computer?

____

____

____

7. Please give any other comments you have.

____

____

____

____

____

Thank you for your information.

MICROCOMPUTER BIBLIOGRAPHY

for

ABE / GED / BASIC SKILL INSTRUCTION

FALL 1982

North Central Technical Institute
Wausau, Wisconsin

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INTRODUCTION

This is the second booklet which has been developed as a part of a 310 Adult Basic Education project, "Microcomputer Instruction for GOAL/ABE" at North Central Technical Institute in Wausau, Wisconsin. The purpose of the booklet is to provide an update on project activities, indicate findings of the project, provide an annotated bibliography, and to indicate hints that may be of help to others interested in using Computer Assisted Instruction (CAI) for basic skills.

Eighteen months of microcomputer instruction has had a positive effect on both instructors and students. Some instructors have taken computer classes, others have programmed their own instructional materials, and curriculum has been revised to include microcomputer instruction. Students have used materials for a variety of purposes and in a variety of ways. Evaluations indicate experiences have been positive.

During this time we have shared our project with many educators. We have found other educators very willing to share information and materials with us. This interaction has been both motivational and beneficial to our program.

If you would like further information on our project, please feel free to contact me.

Lois Gilliland
Lois Gilliland
Career Development Supervisor
1000 Schofield Avenue
Wausau, WI 54401
(715) 675-3331

Summary of The
Microcomputer Project in Basic Skills
at North Central Technical Institute

During the Spring of 1981 a project was implemented at North Central Technical Institute (NCTI) to use microcomputer assisted instruction of the basic skills in reading, mathematics, English, science, social studies, and career development. The microcomputers were used as a supplement to the already established individualized instructional curriculum which was used with adults in the Goal Oriented Adult Learning (GOAL) program.

Description of the Project

The goals of the project were to compare and evaluate microcomputer hardware and software. The microcomputers were compared for ease of use, cost effectiveness, software availability, durability, dependability, and portability of equipment. The software was evaluated for directions, educational sequence, ease of use, dependability, quality of graphics, documentation, appropriateness for adults and student reactions.

Hardware purchased included the following:

3 Apple Computers 48K
2 Atari Computers 32K & 40K
3 Commodore PET 4016, 32K
3 Sanyo Monitors
1 Epson Printer
1 - 825 Atari Printer

3 Apple Disk Drive
1 Atari Recorder
2 Atari Disk Drives
3 Cassette Recorders
2 Sony Televisions

A variety of software was purchased. More quality software was available in mathematics and reading. There were great differences in sophistication and dependability of software programs.

Instructional programs included pre-tests and post tests, classroom management systems, drill, instruction, and/or systems for extra help. Instructional methodologies included fill in the blank, multiple choice, and typing in the proper answer. Some programs included speed adjustments and provisions for printing worksheets to go with the computer lessons. An annotated bibliography has been prepared to describe this software and its evaluation.

Evaluation forms were developed for both students and instructors. Students evaluated their experience with the microcomputer instruction while instructors evaluated the quality of software. Records were kept pertaining to amount of use of specific software.

Findings of the Project

After approximately eighteen months of using computer assisted instruction, the following findings have been noted:

1. The microcomputers are easy to use and enjoyed by both students and instructors.

2. The hardware has been dependable and few problems have been experienced.

3. It is very effective to include the micrcomputer instruction as a supplement to individualized instruction. The computers have been placed in the instructional area instead of in a separate lab setting. This has eliminated the need for a separate aide to monitor computers in the lab and has insured integration with regular curriculum.

4. Choice of hardware depends on ways the computer is to be used and price. The following are characteristics of the hardware:

    a. Atari is strong in graphics and sound. Instructor found it easier to program with Atari. Memory can be expanded with additional modules. Most educational software will run with 32K. There are many wires and modules which must be attached which can be cumbersome. Peripheral attachments must be placed a foot away from the keyboard, or equipment will overheat.

    b. The Apple has the most software available at the present time. Memory can be expanded by additional chips. It has three parts which may make it less easy to transport than the PET. The price is comparable with Atari but greater than the PET. Most software will run on 48K or less.

    c. The Commodore Company has had a special in which three computers could be purchased for the price of two which made it economical. The Commodore has much more free public domain software available for it. The recorders which are used with the PET in the project are considerably slower in loading than the diskette. Memory can be expanded by additional chips. Most educational software will run on 32K.

5. Use of the micrcomputer is very cost effective after initial purchase. It can perform many of the drill and practice functions which take much instructor time with individualized instruction.

6. Software is often difficult to obtain on preview.

7. There are bugs in many software programs. Most vendors have an 800 number which can be called for technical assistance. Most vendors are also very accommodating in replacing these diskettes where bugs are found.

8. Quality of software, in most cases, is directly related to cost.

9. Students especially like the computer assisted instruction due to the immediate feedback. Care must be taken that graphics or other feedback is not too juvenile for adults

10. It is advisable to have at least a one day inservice for instructional staff. Often the hardware vendor is willing to provide inservice or use of the hardware. It is not necessary for instructors to learn programming to implement computer assisted instruction.

Plans for the Future

Use of the microcomputers will be continued in the GOAL program at NCTI. New and expanded activities will include the following:

1. Commercial software will continue to be evaluated. An annotated bibliography will be prepared for software purchased.
2. Statistics on GOAL students, budgets, and growth projections will be placed on Visicalc or other suitable programs.
3. A collection of free public domain software will be developed to be exchanged with others who are interested.
4. Dissemination activities will be continued.
5. Use of the microcomputers will be extended to the Antigo Campus and the Menominee Indian Reservation.
6. Study and evaluation of new hardware and peripheral attachments will continue.

Services Available from the Project

If you wish assistance in starting your computer assisted instruction, contact: Lois Gilliland, Career Development Supervisor, North Central Technical Institute, 1000 Schofield Avenue, Wausau, WI 54401. Services available include the following:

1. Information needed to start CAI for basic skills will be shared.
2. Staff is available for conference and inservice presentations.
3. An annotated bibliography of software is available.
4. Exchange or copying of public domain software can be arranged.

MICROCOMPUTER HARDWARE AND SOFTWARE BIBLIOGRAPHY

The first section of the microcomputer bibliography contains a listing of hardware configurations, commercial software, and public domain software at NCTI. A short description, the price, and evaluations are given for software.

The software bibliography is arranged according to instructional area. Materials in each instruction area are listed under the vendor where the software was obtained.

The evaluations are based on actual experiences by the NCTI GOAL faculty. Some of the materials which have recently been purchased will not be evaluated due to lack of experience in using them. Public domain software will also not be evaluated at this time as the collection has only recently been started.

HARDWARE CONFIGURATIONS

AT

NCTI GOAL PROGRAM

1 Apple II 48K	2 disk drives	MX80 Epson Printer
2 Apple II 48K	2 disk drives	
1 Atari 800 32K	1 disk drive	1 Cassette Recorder
1 Atari 800 40K	1 disk drive	1 Atari Printer
3 Commodore PET 32K		3 Cassette Recorders

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MICROCOMPUTER INSTRUCTIONAL MATERIALS
AT
NORTH CENTRAL TECHNICAL INSTITUTE

Career Development

Interpretive Education
2306 Winters Drive
Kalamazoo, MI 49002

Job Readiness - Assessment and Development - 4 disks - Instructional Guide - Job Attitude Assessment Checklist - These programs are designed for secondary and adult students who cognitive and affective development is below normal. Since this program is not age specific, younger persons of normal to above normal ability may use it. The goals of this program are to provide instructor with assessment data about learner attitudes which are necessary for job success, to develop positive job attitudes in learner, to increase learner knowledge in successful completion of job applications and job interviews, and to increase learner knowledge regarding places/agencies which assist in job placement. Apple Diskette, $165.00. Fair: Strengths - Format is adequate: feedback is good. Weaknesses - Vocabulary is high for remedial students; content is somewhat simplistic for adults.

Opportunities For Learning, Inc.
8950 Lurline Ave., Dept. 26CD
Chatsworth, California 91311

Developing Basic Skills - 7 disks - 1 Instructor Guide for each unit. Presents a new concept in the teaching of contemporary basic skills, stressing self-concept, work, consumer, and personal finance skills. The programs teach the individual skills by having the students read at their own speed and answer multiple-choice questions on the material as it is presented to them. Incorrect responses prompt a reinforcement branch using an alternate approach. The programs incorporate graphics and sound and include a teacher's guide with each unit. Programs are available for use on Apple II, 48K, disk.
Apple Diskette, $199.00 - 7 programs- How To Get and Hold a Job; You Can Get The Job; Self-Concept and Work; Earning Money Now; What You Should Know About Insurance; First Weeks of Work; The Interview; New material - not evaluated.

Wisconsin Vocational Studies Center
University of Wisconsin - Madison
1078 Educational Sciences Unit 1
1025 W. Johnson Street
Madison, WI 53706

Wisconsin Career Information Service (WCIS) Scan I - 2 disks. Program is designed to provide career information to assist in career decision making. The program interacts with the student asking about interests and abilities such as education, mobility, and working conditions. These interests are matched to general career clusters which are then broken into specific careers. General information is given about these careers. Students are referred to printed WCIS information for more specific details. Apple Diskettes, Lease - first copy $169.00, second copy $79.00. Very Good: Strengths - Good student interaction. Weaknesses - Gives only general information, not comprehensive information on careers.

Computer Literacy

Science Research Associates, Inc.
155 North Wacker Drive
Chicago, Illinois 60606

Computer Discovery - 2 disks, 20 student workbooks, 1 Instructor Guide - Grades 6-12. Computer Discovery gives students the fundamental understanding of computers. Students interact with the computer, using Student Workbook and programs provided on diskettes to learn about computer history, hardware and software concepts, writing simple programs, and the computer's role in society. Workbook is available at junior high (grade 6 reading level) or senior high (grade 9 reading level). Instructor's guide includes student exercises and answers, educational objectives, references and resources, and project suggestions. Note: This program was provided free of charge with the purchase of computer. Apple Diskette, $190.00. Very Good: Strengths - Gives the student an opportunity to manipulate the cursor and become familiar with the computer. Weaknesses - It is more complicated than it need be for basic skill students.

English

Atari Software
Computerland
2424 Stewart Avenue
Wausau, WI 54401
or local Atari dealer

Effective Writing - 4 cassette tapes, 6 lessons, read-listen-respond-learn. Covers learning logic, sentences, errors, parts of speech, phrases and clauses, verbs, punctuation. Atari Cassette, $29.95. Poor: Strengths - Nothing outstanding. Weaknesses - Excessive instructional vebage; little student response or activity.

Borg Warner Educational Systems
600 West University Drive
Arlington Heights, Ill 60004-9990

The MicroSystem 80 Word Structure series helps students communicate more effectively in both written and oral discourse by providing individualized instruction in basic word analysis.

Each lesson in Word Structure provides instruction in one or more specific language skills. The contents of the program are structured accoriding to increasing levels of difficulty. As a result of this spiral approach, material presented in later lessons in the series may include information from an earlier lesson series. The program introduces new material which builds upon previously acquired information.

Each level of Word Structure begins with a pretest to determine a student's proper placement within a lesson series and concludes with a post-test to assess mastery. Student records are maintained for review in the management system and may be permanently recorded with the use of an optional printer. Contents: Disk A - Capitalization/Abbreviation; Disk B - Spelling/Syllables; Singulars/Plurals; Disk C - Possessives; Positives/Comparatives/Superlatives; Disk D - Prefixes; Suffixes; Disk E - Capitalization/Abbreviation; Disk F - Spelling/Syllables; Singulars/Plurals; Disk G - Possessives; Positives/Comparatives/Superlatives; Disk H - Prefixes/Suffixes. Word Structure Lesson Series A-H includes 8 disks with management system and Teacher's Guide. Apple Diskettes, $120.00 lease 1st year, $60.00 2nd year. New material - not evaluated.

Educational Activities, Inc.
P.O. Box 392
Freeport, N.Y. 11520

Capitalization - 1 disk - 3 Reproducible Activity Masters. This program covers the various uses of capital letters in headings, addresses, quotations, and names. Several different drill formats are used to maintain student interest. Apple Diskette, $49.00 - Very Good.

English Basics - Program 1 - Parts of Speech - Five diskettes or 10 cassettes: nouns, pronouns, verbs, adjectives, adverbs. Each diskette contains four lessons, all lessons are interactive and designed to generate a high level of student interest through step-by-step systematic approach. PET Cassette, $145.00. Apple Diskette, $170.00.

English Basics - Program 2 - Concepts in Language Arts - Three diskettes or 6 cassettes: homonyms, synonyms and antonyms, and contractions. Program provides tutorial - drill approach increasing the level of difficulty or introducing a variety of topics. Apple Diskette, $99.95. PET Cassette, $85.00. Very Good: Strengths - Very basic material, presented in a clear, understandable way, good for the lower level student. Weaknesses - Disks are not dependable (frequent problems with the disk itself.)

Punctuation - 2 disks - 5 Reproducible Activity Masters - Each punctuation diskette contains one lesson. Punctuation I covers the period, question mark, and exclamation point. The student is given drill work consisting of inserting the correct punctuation at the end of the sentences. Punctuation II covers the comma. Drill practice is interspersed with teaching. Punctuation uses the computer's color, graphics, animation and sound properties to produce a highly motivational format. Apple Diskette, $93.00. Punctuation I - Good, Punctuation II - Very Good.

Quotation Marks - 1 disk - 3 Reproducible Activity Masters - These six lessons illustrate and review the many uses of quotation marks and the proper punctuation of quotations. Each lesson begins with a review of a particular usage followed by a drill exercise. Correct responses in the drill exercises are reinforced with animated graphic rewards. Apple diskette, $49.00. Very Good: Strenghts - Excellent remedial type work for lower level students; clear directions; clever sound effects. Weaknesses - At time material is presented at too slow a rate; frequent problems with disks.

K-12 MicroMedia, Inc.
P.O. Box 17
Valley Cottage, N.Y. 10989

Usage Boners (5-12) This 15-part program provides good practice in common usage errors, e.g. subject-verb agreement, double negatives, etc. The computer not only tracks the student's performance, but shows how the usage error in each problem should be corrected. Ten problems per lesson. Uses a format similar to the one used on the SAT's. 8K. Commodore PET Cassette, $99.00

Marck
280 Linden Avenue
Branford, CT 06082

Individual Study Center - 1 disk - Required to run programs listed below - All ages mix and match any of eight activities with a variety of subject data tapes. TY 1 Apple diskette, $54.95.

Nouns (PD 21) 1 disk - Five programs teach proper and common nouns, capitalization of nouns, and capitalization of titles. Apple diskette, $19.95.

English Grammar Series - Grades 3-12 - 1 disk. All subjects may be used with the following games: Beat the Clock, House on Fire, Around the Ball Park and Puzzler. Each subject also has a completion drill and test and a matching drill and test. The following materials are covered on one disk. Working with Synonyms/Antonyms, TY 51; Working with Adjectives, TY 52; Working with Adverbs, TY 53; Working with Contractions/Homonyms, TY 54; Working with Nouns, TY 55; Working with Pronouns/Prepositions, TY 56; Working with Verbs, TY57. Apple Diskette, $41.65. Poor: Strengths - The concept of gaming while learning is excellent. Weaknesses - Disks are poorly coordinated and full of errors.

Opportunities for Learning
8950 Lurline Avenue, Dept. 26CD
Chatsworth, California 91311

Basic Language Skills - Cassettes - In this set of programs students learn the parts of speech (nouns, verbs, adjectives, and adverbs) through definition and examples. These skills are then tested in a unique game/exercise in which the student inputs words that the computer than incorporates into a short story. Creative expression is effectively combined with grammar skills. Other exercises and review questions are also included. PET Cassette, $70.00. New material - not evaluated.

The Micro Center
Dept. S-4
P.O. Box 6
Pleasantville, N.Y. 10570

The Apostrophe - A lesson in the uses of the apostrophe is followed by a test of the student's understanding of the material. Student performance is summarized at the end of the program. 40-column PET OLD or NEW cassette or diskette. Commodore PET Cassette, $7.95. New material - not evaluated.

Punctuation Series - Elementary and up. These lessons provide drill and practice using a standardized test format. The computer randomly selects and presents a problem sentence. The student must identify where (if at all) a mistake in punctuation occurs. As the learner responds, the computer not only says whether the answer was right or wrong, but sets forth the applicable rule for the correction (if any). Each lesson covers from two to seven rules of punctuation. At the end of each lesson, the learner's performance is summarized. 40-column PET OLD or NEW on 8 tapes. Commodore PET Cassette, $56.00. New material - not evaluated.

Mathematics

Atari Software
Computerland
2424 Stewart Avenue
Wausau, WI 54401
or local Atari dealer

Basic Algebra - Four cassette tapes. Short program, Poorly written and doesn't cover the subject. Atari Cassette, $29.95. We don't recommend this program.

Educational Activities
P.O. Box 392
Freeport, New York 11520

Read and Solve Math Problems, Grades 4-6, Remedial Secondary - 2 disks - 10 lessons, pretest and post test - 14 activity maters, including pre test and post test. Programs are systematic, individualized teaching units. This is a self paced program using graphic animation and rewards for successful completion of tasks as a tool for motivating students. Program objectives are to identify key words in addition, subtracting, multiplication and division problems, write equations, use equations to solve addition and subtraction problems, solve multiplication, addition and subtraction problems, work with more difficult problems in areas mentioned, and work with problems without numbers. Apple Diskette, $85.00. Very Good: Strengths - All items listed in the description. Weaknesses - Uses the same examples all the time.

Basic Math Competency Skill Drills - These individualized programs will not only enhance your students' basic math skills, but will also be a motivational tool to help teachers generate interest in math for poor as well as average students.

In each program, the student or teacher can choose from a wide range of types of examples and levels of difficulty so that every program contains several lessons. All the examples given are randomly chosen by the computer, all examples are within specific ranges of difficulty.

In programs that involve examples with more than one step (for example, Fractions), the student is guided through each example and can't continue until each step is done correctly.

These programs take the boredom out of math drills! Bold graphics are given for correct answers. The computer relates to each student by name. Programs on Cassettes - Addition and Subtraction of Whole Numbers; Multiplication and Division of Whole Numbers; Tables 1-12, Addition, Subtraction, Multiplication, Division; Rounding Off Numbers; Fractions - Addition and Subtraction; Fractions - Multiplication and Division; Decimals - Addition, Subtraction, Multiplication, Division; Graphs and Mean, Median, and Mode; Converting Fractions and Percents; Percent Word Problems; Area, Perimeter, Circumference; Linear Measurement. Commodore PET Cassette, $173.00. New material - not evaluated.

Equations - Each of the programs in this set provides the student with an unlimited supply of random equations which she/he must solve for the variable. Correct solutions are heralded with animated rewards, and a step-by-step display and explanation of how to find the solution are supplied if indicated by poor student performance. Level I - This program provides random equations of one variable and one operation. Level II - This program provides random equations of one variable and two operations, and frequent use of parentheses. Level III - This program provides random equations which include the variable on both sides. Commodore PET Cassette, $45.00. New material - not evaluated.

Percentages - This series of programs provides both instruction and reinforcement in solving percent problems. The programs utilize both tutorial and drill formats to develop skill in percent conversion and computation. All problems given are randomly selected by the computer. Introduction to Percent - This program involves rewriting a decimal as a percent and a percent as a decimal. Fractions as a Percent - This program explains and provides practice in rewriting fractions as a percent. Finding a Percent of a Number - The instruction and practice from the previous programs are used to find a percent of a given number. Commodore PET Cassette, $45.00. New material - not evaluated.

Edu-Ware
Westinghouse Learning Corp.
5005 West 110th Street
Oak Lawn, Illinois

Compu - Math - Fractions. Identifies learner's existing skills and to appropriate level. Consist of a Pre-Test and six Learning Units. Good review of fractions. Apple Diskette, $44.95. Fair: Strengths - Good review exercises. Weaknesses - Can't use parts of program without "muffin". Doesn't give explanations.

George Earl (Computerland)
1302 So. General McMullens
San Antonio, Texas

Lessons in Algebra - Grades 7-9. Material includes beginning elements of algebra: sets, number properties, postulates, exponents and radicals. Apple Diskette, $29.95. Good: Strengths - good explanations and definitions - clever comments - good pacing. Weaknesses - More practice is needed on problems students miss.

Science Research Associates
155 North Wacker Drive
Chicago, Illinois 60606

Computer Drill and Instruction - Level B - Grades 3-4. Addition, and Multiplication and Division of Whole Numbers; Addition and subjtraction of Fractions and Mixed Numbers; Place Value; Comparing and Ordering Numbers. Atari Diskette, $465.00

Level C - Grades 5-6. Reviews and extends the topics in Level B, plus Decimal Concepts and Operations; Multiplication and Division of Fractions. Apple Diskette, $530.00. Excellent: Strengths - Requires active participation of students. Help function is very useful because it shows step by step how to solve the preceding problem. Exercises randomly generated. Selected exercises can be printed. Weaknesses - Printing on the Atari is difficult.

Fact Track - Grades 1-6. Timed or untimed drill on the facts of addition, subtraction, multiplication and division, choice of difficulty level and type of drill. Atari Diskette, $100.00. Fair: Strengths - Drill in knowing the basic combinations can be given in different formats. Weaknesses - Slow to set up the exercises - can't escape.

Arithmetic Games, Set 1 - Grades 1 and up. Arithmetic drill and problem solving. Contain gwo games, three skill levels. Skills included are addition, subtraction, multiplication, division, rounding and estimation, numeration, problem solving, exponents, and order of operations. Atari Diskette, $60.00. Good: Strengths - High student motivation. Weaknesses - Oriented toward younger student.

Sunburst Communications
Room VF 414
39 Washington Avenue
Pleasantville, New York 10570

Algebra Drill & Practice I - Grades 9-12. Enables teachers to provide drill, practice and help in algebra with little direct instructor involvement. Presents almost unlimited example problems and detailed, step-by-step solutions. Topics include algebraic signs, operation with numeric and algebraic fractions, word problems and fractions. Apple Diskette and Teacher's Manual, $140.00. New material - no evaluation.

Miscellaneous

Apple Software
Computerland
2424 Stewart Avenue
Wausau, WI 54401
or local Apple dealer

Apple Pilot (Special program for educational programming by teachers) 3 disks, Editors Manual, Language Reference Manual. This program is a command-oriented author language. It's primary use is to allow teachers to prepare computer assisted lessons with a minimum amount of programming knowledge. It can be used for testing, remediation, and reports. Apple Diskette, $150.00. Not used enough for evaluation.

Interpretive Education
2306 Winters Drive
Kalamazoo, MI 49002

Income Meets Expenses (8) disks - Instructional Guide - Worksheet packet. This program is designed to assist the learner in the development of the basic skills needed for independent living. On all programs involving concept development, three levels have been created in order that the same content can be presented. The highest level, Level I, is presented at the fourth-fifth grade level. Level 2 the sentences are shorter and less complex and the presentations are in a simpler form. Level 3 is the most simple. The reading level is about second grade, sometimes even lower. The goal of this program is to increase knowledge of and increase skill in budgeting. Apple Diskettes, $340.00. Not used enough for evaluation.

The Micro Center
P.O. Box 6
Pleasantville, New York 10570

Simulated Computer - Grades 6-8. Teaches how a computer works, using a visual representation of the parts of a computer and easy-to-follow lessons. Traces the execution of simple programs from input through memory and processing to output. Learn how low-level commands operate a computer. Apple Diskette, $19.95. New material - no evaluation

Reading

Borg Warner
600 West University Drive
Arlington Heights, Illinois 60004

Critical Reading Lessons, Series A-H - 8 disks with management system and teacher's guide for middle grades, junior high, senior high and adults. Critical Reading is an individualized, supplemental reading program designed to introduce students to basic rules of logic and to provide practice in reasoning skills. Apple Diskette, $750.00. Excellent: Strengths - Good for vocabulary development. Weaknesses - Limited documentation, slow loading.

Educational Activities, Inc.
P.O. Box 392
Freeport, N.Y. 11520

O'Brien Vocabulary Placement Test - 1 disk - O'Brien Vocabulary Placement Test is designed to minimize credit for guessing on the part of the student. This test will enable any teacher to find the independent reading level of the student in fifteen minutes, quickly and easily identify students reading deficiencies, provide Special Education teachers with a test format that meets the special needs of their students and place students at a level at which they can experience success. Apple Diskette, $19.95. Easy to use.

Our Weird and Wacky World Critical Reading Program (Reading with Critical Understanding) 1 disk - Reading level 3-4. Interest Level - Ages 10-14. This program consists of eight stories and related skills. The true stories, in this series, represent a wide variety of interesting and novel experiences that occur daily in our world. These light humorous stories provide strong reading motivation while promoting skill development in the area of critical reading and inferential thinking. Each short concise story is followed by exercises in cloze comprehension and critical understanding. Apple Diskette, $39.95. Can be somewhat boring for some adult students.

Our Weird and Wacky World Literal Comprehension Program (Reading with Understanding) 1 disk - Reading Level 3-4, Interest Level Ages 10-14. This eight lesson program presents each story in a short concise manner followed by three different skill exercises in vocabulary development, language usage or decoding, and cloze comprehension. The computer format instructs students by providing directions and responding immediately to the correctness of their answers. Students are given several opportunities to attempt exercises before they are shown correct response. Supplementary dittos are provided with each learning kit. Apple Diskette, $39.95. Can be somewhat boring for some adult students.

Milliken Publishing Company
1100 Research Blvd.
St. Louis, Missouri 63132

Comprehension Power Program - Levels D-E-F, Grades 1-12 - 4 disks in each level, total of 12 disks. The Comprehension Power Program is an inductive comprehension-building program based on a wide range of informative, interesting reading selections. Comprehension skills included in the questions following each selection include: Literal Understanding, Interpretation, Analysis, Evaluation and Appreciation. This program will help the student develop the ability to follow directions, provide extensive and varied reading experiences, improve vocabulary, develop the ability to preview more effectively, develops readers speed while reading comprehensively and provides extensive practice with twenty-five major comprehension skill strategies. Apple Diskettes, $425.00. Excellent: Strengths - Adjustable speed; versatile, excellent management system; choice of preview on graphics. Weaknesses - Takes more time for initial set-up.

Program Design, Inc.
Marck (distributor)
280 Linden Avenue
Brandford, CT 06082

Reading Comprehension: What's Different - 1 cassette - Age 8 and older - Ten reading comprehension programs presenting logical problems to the students who pick the one correct word out of the four choices given. Builds analytical skills. Atari Cassette, $23.95. Good: Strengths - Good for vocabulary development. Weaknesses - Limited documentation, slow loading.

Vocabulary Building I (Beginning) - 1 cassette - Junior-Senior High School and older - Eleven programs include a set of graded vocabulary questions, synonyms, and antonyms. The last lesson is a test on vocabulary. The course covers a total of 400 questions, 2,000 words. Atari Cassette, $14.95. Good: Strengths - Good for the cost involved. Weaknesses - Long time to load, limited documentation; directions could be clearer, no management.

Vocabulary Building II (Advanced) 1 cassette - High School and Adult. This series of 11 programs is like those in Vocabulary I, but using a more advanced word list. Atari Cassette, $14.95. Good: Strengths - Good for the cost involved. Weaknesses - Long time to load, limited documentation; directions could be clearer; no management.

Analogies - 1 cassette - Analogies contain 6 programs that teach what an analogy is and what the common types are. It provides a method for analyzing analogies and provides practice in handling all types of analogies. Final lesson is a test. Atari Cassette, $14.95. Good: Strengths - Good for upper level students. Weaknesses - Long time to load; limited documentation; no management.

Reading Comprehension: What's Different - 1 disk - Ages 8-up. Five reading comprehension programs which present logical problems where the student picks the one word in four which doesn't belong with the rest. Builds analytical skills for understanding what you read. Apple Diskette, $23.95. Good: Strengths - Good for vocabulary development. Weaknesses - Limited documentation.

Science Research Associates
155 North Wacker Drive
Chicago, Illinois 60606

Phonics - Initial Consonants - 3 diskettes, 7 cassettes. A student placed program, each cassette contains two lessons, one per side, both of which focus on the same phonic element; but they differ in their presentation of that element. Student receives immediate feedback to responses and is given a score on performance. Apple Diskettes and Cassettes, $150.00. Very Good: Strengths - Use disks with audio tape so you get sound and picture; works well with ESL and non-readers. Weaknesses - Speech is somewhat elementary sounding on side 1.

*Phonics - Short Vowels - 2 diskettes - 5 cassettes. See above description. Apple diskettes and cassettes, $150.00. Very Good.

The Micro Center
Department S-4281
P.O. Box 6
Pleasantville, New York 10570

Tachistoscope - Grades K-6. Program flashes small groups of words on the screen in random order. Student attempts to read word groups at a glance and then reproduce them on keyboard. Commodore PET cassette, $7.95. New material - not evaluated.

Westinghouse Learning Corp.
5005 West 110 Street
Oak Lawn, Illinois 60453

Comp U - Read - 1 disk. This 4 program series is designed to enhance student's reading ability by a sequence of increasingly complex skills from simple character recognition to identification of rapidly presented words in the first two programs. The third program, vocabulary practice, uses synonyms and antonyms as a tool. The four program provides high speed sentence presentation to build skills in speed and comprehension. Apple Diskette, $20.95. Very Good: Strengths - Good for speed reading. Weaknesses - No management.

Spelling

Atari Software
Computerland
2424 Stewart Avenue
Wausau, WI 54401
or local Atari dealer

Spelling 4 cassette tapes. There are four lessons on each tape for a total of sixteen lessons which include plurals, suffixes, homonyms, syllables and consonants. The method of instruction is read-listen-respond-learn. Atari Cassette, $29.95. Poor: Not recommended - very little student interaction or participation.

Educational Activities
P.O. Box 392
Freeport, New York 11520

Spell - Scrambled Letters and Flash Spelling - Two programs on one disk, designed to maintain a high level of student motivation and interest. Teachers may add their own spelling words to both lessons.

Scrambled letters: Computer presents spelling words with letters scrambled. Two students compete for correct answer. All words are displayed, with the correct spelling, at the end of the exercise.

Flash Spelling: New words are flahsed one by one on the screen. Student must type in correct spelling. After an incorrect response the same word is flashed again for a longer period of time. Apple Diskette, $33.50. Good: Strengths - Students love the game competition. Weaknesses - Not enough words (some repeated too often). The printed capitals are not easily recognized.

Spelltronics - 3 disks - Grade Level 4, Remedial All Grades Program utilizes the letter cloze technique to reinforce correct spelling and build visual memory. Entire program teaches 240 new words and allows teacher to add additional words. Each word is presented three separate times with different letters deleted. Words are grouped based on linquistic, phonics, or spelling concepts. Advancement is from simple to complex. Apple Diskette, $65.00. New material - not evaluated.

Marck
280 Linden Avenue
Branford, Ct. 06082

Spell (Grades 1 through 8) The following games may be used at all grade levels: House on Fire, Around the Ball Park, Beat the Clock, and Puzzler. A matching drill and test and a completion drill and test are provided at each level. Apple Diskette, $47.60. Poor: Impossible to boot the system even when carefully following instructions.

MEEC Publication
2520 Broadway Drive
St. Paul, Minnesota 55113

Spelling - Special Needs, Vol. 1 - Designed for level one students. Multiple choice format. Apple Diskette, $15.00. Good: Strengths - Good for level I students. Weaknesses - Have some problems getting disk to work.

Westinghouse Learning Corporation
5005 West 110 Street
Oak Lawn, Illinois 60453

Spelling Builder - 1 disk, 1 cassette. Eight programs plus an audio cassette are included in this package. Designed for junior high and older, this exercise helps students overcome spelling difficulties through drill and teaches a method for approaching difficult words. Ideal for those who have mastered basic spelling. Apple Diskette, $28.95. Excellent: Strengths - Fine instructional format; Ample opportunity for student response; Presents all the basic rules; Give good examples. Weaknesses - none identified.

Free and Inexpensive Software

Public Domain Software

Public domain software can be copied free of charge. Material can be copied free of charge. Material can be copied from the original author or is often available from a local microcomputer dealer.

Commodore Pet Free Software
Available from local Commodore dealer

A STORY

Fill in blanks by responding to querries for nouns, adjectives, etc. to complete a story which usually ends up nonsense but fun.

ADD & SUB

Requires calculator or scratch pad for answers to exam questions.

BASIC STATISTICS

Solves standard error, mean and standard deviation.

CAPITAL CITIES

World capitals drill.

CAPITALS - Program 10

Bet you can't get all the capitals for the countries given or given the capitals, guess the countries.

CENTRAL CONICS

Conic math and geometry drill.

DART - Program 6

This program checks your speed and accuracy at adding, subtracting, multiplying or dividing. It scores you and other players on a dart board. Good to improve accuracy while speeding up estimating.

DECIMALS

Arithmetic of numbers containing decimals.

DIVISION

Simulated long division of whole numbers. Excellent! Answers may or may not have remainders (optional).

FACTORING DRILL

Factoring of polynomial equations up to the 6th degree.

FACTORING WHOLES

Prime factoring of whole numbers.

FACTORS

Practice in factoring of algebraic trinomials.

FINAL LONG DIV. - Program 22

I wrote this program as an experiment to see if I could replace pencil and paper and still get immediate feedback.

FLASHER

Memory drill using flashed words and/or messages.

FRACTION GAME 2.0

Shoot darts at a target by giving the fraction that best represents the position of the target on a scale.

FRACTIONS DRILL

Fraction arithmetic drill.

FWCI INTEGER TTT

Integer Tic Tac Toe.

GEOGRAPHY

From Creative Computing. Tests knowledge of capitals and countries.

HANGMAN

From PCC.

HANGMAN 3.0

The game of Hangman (using words).

HANGMAN - Program 9

A fun game to pick out the correct word. Some teachers do not like the idea of a hanging man so possibly modify so that the rope breaks!

HANG MATH

A hangman using numbers.

INTEGERS

Integer math drill. Optional difficulty levels.

LIFE EXPECTANCY

Your own personalized mortality forecast. Not to be taken seriously.

LINEAR SYSTEMS

Solve linear systems.

MAT 250 MLA

Drill in straight line analytic geometry.

MATRIX SOLUTION - Program 7

Solves math equations up to a 10 x 10 matrix. Instructions are self prompting.

MECHANICS

Drill on velocity, acceleration, etc. for time displacement equations.

METCONV

Converts U.S. standard to metric.

METRIC CONVER'N

Does metric conversions. Allows user defined functions.

MLA - ARITHMETIC

Much like DECIMALS.

MULT BIN 1A, 16K - Program 25

A program to demonstrate the multiplication of binomials.

MULTIPLOT

Plots up to 3 functions on the same graph. Very useful to demonstrate summing of functions.

PALKO'S AUDIT

Energy consumption quiz.

PERCENT DRILL

Find percent to decimal, decimal to percent and indirect percentages.

PLANES

Geometric planes drill.

POWERS & ROOTS

Squares, square-roots, cubes and cube-roots of whole numbers.

PRACT FOIL, 1B - 16K, Program 26

A program which allows a student to practice multiplying two binomials together.

PRIME NUMBER, Program 12

This short program was written to show prime numbers could be generated using the PET computer.

READABILITY

Readability test based on ease of understanding and human interest content. User enters text.

ROOT FINDER

HP root finding program.

SKELTON DRILL

Skelton program for designing new drills.

SPEED READ

Increase your reading speed.

SPELLING DRILL

Confirmation of words which may or may not be wrong as displayed.

STRAIGHT LINE

More straight line geometry.

TRIANGLE SOLVING, Program 14

Solves triangles given any three conditons (e.g. three sides, one side two angles, etc.).

U.S. CAPITALS

WHOLES

More whole number arithmetic.

WHOLE NUMBERS

Addition, subtraction and multiplication of whole numbers.

Z-SCORE

Computes z-scores and gives instructions for the normal curve computations.

Softswap

Public domain software exchange for Apple, Compucolor, PET Commodore, Atari, and TRS 80. Free disk exchange or $10 per disk purchase price.

Contact: Ann Lathrop
Library Coordinator
San Mateo County Office of Education
333 Main Street
Redwood City, CA 94063

Course Ware Magazine

Each issue contains actual courseware, a teacher's guide, students' guide and student worksheet. Included are a C-10 cassette tape with at least two machine readable programs selected from the curriculum areas of Business; Consumer Economics; English; Fine Arts; Foreign Language; Science and Social Studies. Programs available for students K-12, edited by nationally known educator and writer, Dr. Dan Isaacson (Example: Spell 'N' Time Quizstat) Subscription $65.00, Trial copy $15.95.

Contact: Course Ware Magazine
4919 North Millbrook #222
Fresno, California 93726

MICROCOMPUTER CATALOGS,

NEWSLETTERS AND PERIODICALS

The following listing of catalogs includes those available at the NCTI GOAL program. More and more catalogs become available as hardware and software development increases. The listing of periodicals includes only those to which NCTI has a subscription or that have been previewed by GOAL staff.

MICROCOMPUTER CATALOGUE LIST

Addison-Wesley Publishing Company
Reading,
Massachusetts 01867

Aquarius Publishers, Inc.
People Materials
P.O. Box 128
Indian Rocks Beach, FL 33535
(813) 595-7890

Borg Warner Education Systems
Micro System 80
600 West University Drive
Arlington Heights, IL 60004
(800) 323-7577

The Code Works
Box 550
Goleta, CA 93116
(805) 683-1585

Creative Computing
39 E. Hanover Avenue
Morris Plains, N J 07950

CVIS (Computerized Vocational
Information System
Towson State University
Lida Lee Tall Rm #7
Towson, MD
(301) 321-3913

EDL/McGraw-Hill
1221 Avenue of the Americas
New York, N Y 10020

Educational Activities, Inc.
P.O. Box 392
Freeport, N Y 11520

Educational Audio Visual Inc.
Pleasantville,
New York 10570

Educulture
1 Dubuque Plaza, Suite 150
Dubuque, Iowa 52001
(800) 553-4858

Edu-Soft
4639 Spruce St.
Philadelphia, Pa 19139
(215) 747-1284

Guidance Associates
Communications Park, Box 3000
Mount Kisco, N Y 10549

Hammet Microcomputer Division
J.L. Hammett Co., Inc.
Hammett Place, Box 545
Braintree, MA 02184
(800) 225-5467
(617) 848-1000

Hartley Courseware, Inc.
Box 431
Dimondale, Michigan 48821
(616) 942-8987

D. C. Heath and Company
125 Spring Street
Lexington, Massachusetts 02171
(800) 428-8071

Ideatech Co.
P.O. Box 62451
Sunnyvale, CA 94088

Instructional Communications
  Technology, Inc.
Resources for Learning
619 South Main Street
Lake Mills, WI 53551
(414) 648-8775

Interpretive Education, Inc.
157 S. Kalamazoo Mall
P.O. Box 3126
Kalamazoo, MI 49003-3126

K-12 Micro Media Inc.
P.O. Box 17
Valley Cottage, N Y 10989
(201) 391-7555

(continued)

Lakeshore Curriculum Materials Co.
Lakeshore Life Skills
2695 E. Dominquez Street
P.O. Box 6261
Carson, CA 90749
(800) 421-5354

Lightning Software
P.O. Box 11725
Palo Alto, CA 94306
(415) 856-1855

Marck
280 Linden Avenue
Brandord, CT 06405
(203) 481-3271

Math Software
1233 Blackthorn Place
Deerfield, IL 60015

Charles E. Merrill Publishing Co.
Curriculum Product Review
1300 Alum Creek Drive
P.O. Box 508
Columbus, Ohio 43216

Micro Center
Department HS
P.O. Box 6
Pleasantville, N Y 10570
(914) 769-6002

Micro School Programs
Bertamax Inc.
101 Nickerson St., Suite 202
Seattle, WA 98109
(206) 282-6249

Midwest Visual Equipment Co.
6500 North Hamlin Avenue
Chicago, Illinois 60645

Milliken Publishing Company
1100 Research Blvd.
St. Louis, Missouri 63132
(314) 991-4220

Opportunities For Learning, Inc.
8950 Lurline Ave., Dept. 26 CD
Chatsworth, CA 91311
(213) 341-2535

A.W. Peller & Associates, Inc.
Educational Materials
124 Rea Avenue
Hawthorne, N J 07506
(201) 423-4666

Photoart Educational Media Services
840 North Plankinton Avenue
Milwaukee, WI 53203
(414) 271-2270
distributor for Microcomputer
software

Programs For Learning, Inc.
P. O. Box 954
New Milford, CT 06776

QUE
Catalogue #6
5 Chapel Hill Drive
Fairfield, CT 06432

Random House
School Division
400 Hahn Road
Westminister, MD 21157
(800) 638-6460

Random House
School Division
Microcomputer Courseware Catalogue 198
400 Hahn Road
Westminster, Md. 21157
(800) 241-6402

Readers Digest
Catalog 1982
Educational Division
Pleasantville, N Y 10570
(914) 769-7000, Ext. 2763
NOTE: William Land, Local Agent
907 Mulberry Drive
West Bend, WI 53095
(414) 344-0513

Readers Digest
Edu-Disks
Educational Division
Pleasantville, N Y 10570
(914) 769-7000, Ext. 242

The Riverside Publishing Company
Instructional Materials Catalog 1982
8420 Bryn Mawr Avenue
Chicago, Illinois 60631

Saint Martin's College
Lacey,
Washington 98503

Science Research Associates, Inc.
155 North Wacker Drive
Chicago, IL 60606
(800) 621-0664

(continued)

School Microware Reviews
Dresden Associates
P.O. Box 246
Dresden, Maine 04342

SVE/Society for Visual Education, Inc.
1345 Diversey Parkway
Chicago, IL 60614
(800) 621-1900

Softswap
Ann Lathrop (Library Coordinator)
San Mateo County Office of Education
333 Main Street
Redwood City, CA 94063

Software City
22 E. Quackenbush Avenue
Dumont N J 07628
(201) 385-2395

The Source
Source Telecomputing Corporation,
 a subsidiary of
The Reader's Digest Association, Inc.
1616 Anderson Road
McLean, Virginia 22102
(703) 734-7500

Sunburst Communications
Room V 4141
39 Washington Avenue
Pleasantville, N Y 10570

T.H.E.S.I.S.
P.O. Box 147
Garden City, MI 48135

United Software of America
750 Third Avenue
New York, N Y 10017
(212) 682-0347

Versa Computing, Inc.
3541 Old Canejo Road, Suite 104
Newbury Park, CA 91320
(805) 498-1956

Webster Division
McGraw-Hill Book Company
1221 Avenue of the Americas
New York, N Y 10020
NOTE: Edward J. Stone, Agent
2107 North Seventh St.
Sheboygan, WI 53081
(414) 457-0183

NEWSLETTERS

Munchline, The Microcomputer Newsletter
 of the LACE Network
Computer Center
University of Wisconsin
LaCrosse, WI 54601

Contains information on hardware and software, tips for microcomputer use, and evaluation of computer magazines. Free

MECC Newsletters
USERS, The MECC Instructional Computing Newsletter
2520 Broadway Drive
St. Paul, MN 55113

Contains information about materials and services available through the Minnesota Educational Computing Consortium (MECC). Software reviews and microcomputer tips are also included. Free

REVIEW PUBLICATIONS

Microcomputer Directory: Applications in Educational Settings.

Contact:

Microcomputer Directory
Gutman Library
Appian Way
Cambridge, MA 02138
Price $12.50

School Microware Reviews, Evaluations of Educational Software for Apple, PET, TRS80.

Contact:

Dresden Associates
P.O. Box 246
Dresden, Maine 04342

Evaluation of pre-college educational software. Assists in locating other sources of evaluation and information on instructional software. Has a cooperative software review program. Single issue $20. Per year (2 issues) $25.

Hands On!

Contact:

TERC
8 Eliot Street
Cambridge, MA 01238
Price $5.

PERIODICALS

AEDS Journal, AEDS Monitor
1201 Sixteenth Street, N.W.
Washington, D.C.

Classroom Computer News
Department of Information Systems
California State University
Fresno, CA 93740

Computing Teacher, The
Dept. of Computer & Information Science
University of Oregon
Eugene, OR 97403
Price $14.50 per year

Creative Computing
P.O. Box 780-M
Morristown, N.J. 07960

Journal of Computer - Based Instruction
(ADCIS), Western Washington University
Bellingham, WA 98225

Microcomputers in Education
Queue Inc.
5 Chapel Hill Drive
Fairfield, CT 08432
Perice $28.00 per year

Robert Purser's Quarterly Magazine
P.O. Box 466
El Dorado, CA 95623

EVALUATING BASIC SKILLS SOFTWARE FOR ADULT BASIC EDUCATION

by Bruce DeBoer
Staff Development Specialist
Moraine Park Technical Institute
Fond du Lac, Wisconsin 54935
(telephone: 414-922-8611)

There is an ever increasing amount of software on the market today that is purported to be applicable to the basic skill area of adult basic education (ABE). Unfortunately, not all of it is good quality software and not all of it is adult.

Although today's software is much improved over that available just a short time ago, some of it still suffers from problems in programming, program content, or both. The fact is that most good programmers are not educators and most good educators are not programmers. As a result, many programs are extremely limited in scope and often do not pay much heed to the learning process-cognitive development, educational psychology, and adaptive instruction. At the same time, many of these programs certainly do not take full advantage of the unique and powerful capabilities of the microcomputer. Also, because of the high costs associated with the development of good software programs, many of the programs in the basic skills area, while appropriate for adults in content and presentation, were clearly developed for children in terms of graphics, commentary, and responses, but are being marketed as ABE software.

So where to start? How do we know which software to buy? To help answer these questions, I will briefly outline the three major modes of computer assisted instruction (CAI) used with microcomputers.

MODES OF CAI

1. Drill and practice programs are designed to build skills and provide students with practice in those skills until either they or the instructor feel that at least minimal proficiencies have been met. The drill and practice mode generally assumes previous study in the particular skills area. While not all drill and practice programs are structured the same way, most present some type of feedback to the student. The best drill and practice programs usually allow the student to choose the number and level of difficulty of the questions and provide a chance to repeat sections when extra practice is needed.

2. Tutorial instruction generally presents the students with new material, provides questions to measure how much of the new material the student has mastered and based on this evaluation provides remediation or skips over to new more difficult material. The best tutorials assume no previous knowledge of the material and carefully guide the student through all the steps required to understand the concept. In addition, a well developed tutorial will go beyond the usual "Right", "Wrong", or "Please Try Again" feedback by providing the student with an explanation of why a particular response is incorrect.

3. Simulations present the student with a real-life or idealized situation. The complex relationships among the variables that influence the situation must be interpreted by the student and the final outcome of the situation is determined by the actions and decisions which he or she make during the course of the program. Because of the difficulty in programming, there are few good simulations available as yet.

Well, that's a beginning. Now we know what type of program we're looking for. But just how do we go about evaluating it? We must first develop guidelines as to just what a good CAI Program should include. Not surprisingly, the general features of program design are very similar to the guidelines for developing competency based instruction (CBI) programs that are presently used in many of our vocational schools. The basis for CBI is the ability to adapt the educational process to meet the needs of the individual. A well developed CAI Program should reflect this same adaptability and include the following general features.

GUIDELINES FOR CBI PROGRAM DESIGN

1. The student should have as much control as possible over the sequence of the instructional program. The sequence of learning should include options which allow for review of previously presented material; for decisions about the type, level of difficulty and number of problems or exercises to be completed; and the ability to skip over material and choose the shortest routes of exit from the program possible while still meeting all the objectives of the lesson.

2. The system of instruction should be individualized and adaptive to the needs of the student in terms of the amount of time and the amount of material that is most appropriate to their unique learning abilities and styles.

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3. As in CBI, programs should be broken down into modules which are again structured into flowchart format forming the complete program. This type of organization provides for the development of skills not previously mastered and the ability to skip over modules of instruction in which the student is already competent.

4. The student should be informed of that which he is not able to do in terms of performance objectives and all learning activities should be developed with mastery of these objectives in mind.

5. The evaluation of student progress, as in CBI, must be measured in terms of mastery of the performance objectives. If such evaluation indicates deficiences, the student should be channeled into remedial activities. On the other hand, if such evaluation indicates mastery, new material should be provided. The best programs include pre-tests to correctly place the student within the program and present material most apprpriate to indicated need.

6. Programs should be, if possible, multi-sensory in their presentation and take full advantage of the machine's unique capabilities.

7. In addition to the structural considerations, certain human factors should be considered in program design. Programs intended for the adult should be written for the adult. They must be written with a positive attitude toward the subject matter; put the learner "in charge" of the program; be

accurate in terms of factual presentation and use of grammar to hold the students' trust; be clear in their instructions as to what is expected and how it should be done to avoid frustration; keep the student involved; amd be written with presentation times that don't fatigue the learner.

8. Programs should provide clearly written support materials and documentation.

Even if a software program follows the guidelines for general program design to the letter, the specifics of the presentation are also very important. Here are a few of the characteristics of a program that can make or break it as a successful educational experience.

PRESENTATION OF TEXT AND GRAPHICS

1. Is the software free from programming errors? These can range from grammatical errors to errors in execution of the program. Good programs contain no errors.

2. How does the program present text material? The perceptual impact is an important consideration. Screens should be attractively formatted and not visually overwhelming. A good rule of thumb is that you should never have more than 50% of the screen filled with text at any one time. Any more than that produces viewer frustration because it is hard to read.

3. Does the program use graphics to box, underline, or reverse important textual materials. This can break up the monotony of screens full of text.

4. If graphics or animation are used, are they used appropriately? In some programs, graphics seem to be used only for the sake of using them. Are they necessary? If they are not, they may be nothing more than a distraction from the real intent of the program.

INSTRUCTIONS, EXAMPLES, AND PROGRAM CONTROL

1. Are clear instructions for the operation of the program made available to the user whenever they are needed? Programs without clear instructions often become frustrating as the student must guess what to do in order to continue the program. The user should also be given the option of skipping instructions if they are not needed.

2. Are students provided with examples as to how responses or response choices are to be inputted? The student should not be forced into a trial and error method of completing the task before him.

3. Dos the program limit the number of incorrect responses for a particular question? Programs that require a correct answer before going on to the next question may be particularly frustrating if the question requires a typed response in the "fill-in-the-blank" format. After a limited number of incorrect responses, the program should cycle to the next question or the next appropriate frame.

4. Does the program provide the user with control over the length of time a particular frame is on the screen? The student should be given control over continuing to the next frame where appropriate.

5. Is a menu provided? The student should be given the opportunity to choose from a variety of lessons within a program or activities within a lesson. Menus allow the students to choose topics in their particular interest or have some input as to the sequence of lesson material. One of the menu choices should be to end the session.

INSTRUCTIONAL DIALOG

1. How does the program present the instruction? Some programs turn the microcomputer into nothing more than an electronic textbook. Good programs use the unique capabilities of the computer such as erasing, rewriting, flashing or animation to "show" key concepts rather than to simply "tell" about them.

2. Are the lessons interactive? Does the program effectively use prompts? Programs must respond to both right and wrong responses on the part of the student. Feedback to incorrect student responses should go beyond a simple "Please Try Again" to a short statement of why that particular response is not appropriate. "Wrong answer" prompts should guide the learner toward the correct answer. Correct answers should also be reinforced through appropriate prompts.

3. Does the program use dialog devices to get and maintain interest? The variation of computer generated responses, humor, pace change, and surprise are very effective in maintaining interest levels over a longer period of time. All lessons in a program should not follow exactly the same format.

4. If typed responses are required to be input by the student, does the program accept keywords or parts of keywords as responses? An error in typing in a response should not be read by the computer as an improper response unless it is a typing test.

5. Does the program report student performance periodically during the lesson and at the end of the session? This information will help guide the student toward the appropriate choice of the next session.

6. Is the language level appropriate for the adult? Adults do not want to be "talked down to". Lesson material, responses, and prompts should be written for adults, not children.

CONCLUSION

The guidelines and specifics you just read should provide you with the basics for developing your own system of evaluation and an evaluation checklist. Unfortunately, they do assume you have access to the software. If you do not, don't forget the value of "word of mouth", discussions with other users and the published evaluations in the many microcomputer magazines in print today. One word of caution here though, different reviewers may have different goals than yo do. Only you know what will work best in your ABE classroom.

RESOURCES

Calswell R.M., Guidelines for Developing Basic Skills Instructional Materials for Use with Microcomputer Technology. Educational Technology, October 1980.

Slattery T., Human Factors Consideration in Course Authoring. IBM CBT Newsletter #23, August 1980.

Alexander W.J. The problem of Software. VOC ED, April 1982

BDB:el

17/21/82

How to Evaluate Software

Until recently, there were no guidelines to help educators decide whether a particular computer program would suit both their machines and their instructional objectives. Now, there are several, and two of the better guides are described here. Both have undergone extensive field testing and both use terms that are well defined. They are now available to teachers who wish to evaluate computer programs before they buy them and to educators planning inservice courses on the use of computer-based instruction.

Evaluation Guide

MicroSIFT, an acronym for Microcomputer Software and Information Service for Teachers, is a clearinghouse for educational programs designed to run on microcomputers. Located in Portland, Oregon, at the Northwest Regional Educational Laboratory, MicroSIFT has developed a guide to assist educators evaluate computer programs.

The Evaluator's Guide for Microcomputer-Based Instruction Packages developed by MicroSIFT staff has two sections. The first section, Courseware Description, deals with the instructional purpose of a program (remediation, standard instruction, and enrichment); the instructional techniques used (including drill and practice, problem solving, and simulation); and the documentation or supplementary material included. The first section also includes items that will allow teachers to determine whether the program being considered will run on the microcomputer they have in their school or classroom.

The second section of the *Guide* covers Courseware Evaluation. Here users are given a four-point scale to rate the program on 21 items in three categories: content, instructional quality, and technical quality. Criteria for rating each item are described in the *Guide*. Finally, programs are judged as "recommended for use;" "recommended for use if changes are made;" or "not recommended for use."

Copies of the *Guide* are available from ERIC (ERIC Document Reproduction Service; P.O. Box 190; Arlington, VA 22210; order number ED 206 330; 91¢ microfiche, $5.30 for paper copy) or from the International Council for Computers in Education; Department of Computer Science; University of Oregon; Eugene, OR 97403 ($2.50).

Computer Courseware Review Form

Another widely used form for evaluating courseware was developed and tested by the Minnesota Educational Computer Consortium (MECC), an organization that coordinates and provides computer programs and services to educators in Minnesota. Like MicroSIFT's *Evaluator's Guide*, MECC's *Computer Courseware Review Form* deals with the technical qualities of programs; the availability of support materials; and a number of educational considerations, such as clarity of instructional objectives and appropriateness of the text students are expected to read. Also, the form asks teachers to observe and comment upon student reactions to the program.

Copies of the *Computer Courseware Review Form* and courseware evaluation forms developed by MECC are available at no charge from the Minnesota Educational Computer Consortium; Instructional Systems Development; 2520 Broadway Drive; St. Paul, MN 55113.

Let Someone Else Evaluate Software

If you would like to read someone else's critique of an educational program you are considering buying, there are several magazines, journals, and newsletters that include reviews of educational software. Here are a few of them:

MicroSIFT News
300 S.W. 6th Avenue
Portland, OR 97204
(no charge)

School Microware Reviews
Dresden Associates
P.O. Box 246
Dresden, ME 04342
($35; 2 issues per year)

Electronic Learning
Scholastic, Inc.
902 Sylvan Avenue, Box 2001
Englewood Cliffs, NJ 07632
($15; 6 issues per year)

Classroom Computer News
51 Spring St.
Watertown, MA 02172
($16; 6 issues per year)

The Journal of Courseware Review
P.O. Box 28426
San Jose, CA 95159
($6.95 per issue)

From: NEWS From The Basic Skills National Assistance Consortium, May 1982 (Vol. 2, No. 3). Published by CEMREL, Inc. (3120 59th Street, St. Louis, MO 63139) under contract with the Basic Skills Improvement Program, Department of Education, Washington, D.C.

RESOURCES

Research Examines Potential of Educational Technology

"Educational Technology: Bright Promise or Dim Future?" was the topic of a recent seminar sponsored by the Council for Educational Development and Research (CEDaR), an organization of educational research laboratories and centers. At that meeting, representatives of educational laboratories and centers and a panel of experts in technology and instruction discussed how schools are using technology to improve instruction, what hardware manufacturers are doing to expand the use of microcomputers in schools, and what the federal government is doing to support technology-related research and development.

During the seminar, participants expressed concern about four trends that may, if not challenged, foretell a dim future for educational technology. First, while schools are buying microcomputers at an ever-increasing rate, many educators in those same schools are uncertain about how computers can be used to improve instruction. Second, the quality of the hardware being produced is far ahead of the quality of the programs being written to make use of the machines. Third, technology is being driven by industry specialists, many of whom have limited understanding of sound instructional techniques. And finally, if in the future the public perceives that educational technology has failed to deliver its promises of creating highly motivated students who learn more, more quickly, then school people may overreact by completely abandoning technology.

Copies of the proceedings of the seminar, *A Bright Promise But a Dim Future*, are available from CEMREL, Inc.; Attention: Sheila Walker; 3120 59th Street; St. Louis, MO 63139; no charge.

Grants for Computers

Tandy Corporation is sponsoring a grants program for individuals and staff members of nonprofit educational organizations who wish to apply for TRS-80 computers, accessories, and software to examine issues related to the use of microcomputers in teaching and research. Grants are limited to $15,000 and cannot be used to support services or staff. Applications may be submitted at any time, but are reviewed quarterly. Proposals to be considered on the next due date, June 30, must deal with computer literacy among teachers. Proposals submitted for the September 30, 1982 competition should address how microcomputers can be used in elementary schools to teach the basic skills.

For an application package, write to Tandy TRS-80 Educational Grants Program; Radio Shack Education Division; 400 Atrium; One Tandy Center; Fort Worth, TX 76102.

Obstacles to Expanded Computer Use

Fifty-four percent of school superintendents responding to a national survey on current and projected computer use (published in 1980 by Jack A. Chambers and Alfred Bork, co-chairs of the Association for Computing Machinery's Task Force in Computer Assisted Learning) reported that computers were being used in their districts to provide instruction in fields not related to data processing or computer programming. High school teachers of mathematics are now, and are projected to remain, the heaviest users of computers. However, by 1985, superintendents expect that computers will also be used by teachers in about half of the junior high and elementary schools in their districts.

Clouding these projections of continually expanding computer use for instructional purposes were several impediments that must be overcome. In two-thirds of the districts reporting, money to buy computers was listed as the most serious obstacle to expanded computer use. Other impediments were lack of knowledge about computers and computer-assisted learning, faculty resistance, and the lack of enough high-quality courseware. School people also indicated they need consultants in the schools to train teachers to select and use instructional courseware. They said too that off-campus centers offering teachers a range of computer-assisted learning services are also needed.

The full report, *Computer Assisted Learning in U.S. Secondary/Elementary Schools*, is available from ERIC Document Reproduction Service; P.O. Box 190; Arlington, VA 22210; order number ED 202 461; 91¢ (microfiche); $3.65 (paper copy).

From: NEWS From The Basic Skills National Technical Assistance Consortium, May 1982 (Vol. 2, No. 3). Published by CEMREL, Inc. (3120 59th Street, St. Louis, MO 63139) under contract with the Basic Skills Improvement Program, Department of Education, Washington, D.C.

Microcomputer Study Reports Trends

"Schools are buying microcomputers at a rapid rate. Yet, with the exception of anecdotal records, we really don't know how microcomputer innovations are taking place in schools. In fact, we don't even know what are the most important questions to ask about this new technology."

That quote is taken from the preliminary report of an important new study on microcomputer use in schools prepared by Karen Sheingold of the Bank Street College of Education with support from the National Institute of Education. In her report, *Issues Related to the Implementation of Computer Technology: A Cross-Sectional Study,* Sheingold briefly summarizes case study material collected from three school sites in different parts of the country using microcomputers. Then, she discusses five trends that "raise issues of critical importance." The trends and brief excerpts from Sheingold's report follow.

- *Differential Access to Microcomputers.* "In all of our sites we observed differential use according to sex, particularly at the secondary level. This is not an issue of access per se, since girls are not systematically excluded from using computers. At the elementary level, each sex could and did use the micros more or less equally. But, starting at the seventh grade, when the micros moved out of classrooms and hallways into math and business departments, there was a much higher proportion of male students who used the micros."
- *Emergence of New Roles in Response to Microcomputers.* "One role which has emerged is that of teacher buff. Teacher buffs . . . are not only interested in and knowledgeable about the microcomputers, but play a central role in spreading the innovation by teaching and encouraging other teachers."
- *Lack of Integration into Elementary Classrooms and Curriculum.* "What kind of support and knowledge do teachers need in order to integrate classroom work with microcomputer activities? Will the teacher buff turn out to be an essential resource for making this happen?"
- *Inadequate Quantity and Quality of Software.* "Teachers have to have better quality software. But neither teachers nor developers seem to know, or are able to state explicitly, what makes good software."
- *Lack of Knowledge of Effects and Outcomes.* "The microcomputer innovation is being fueled by a great deal of enthusiasm, with the conviction that the microcomputer is a good thing. Yet no one knows for sure if it is, how it is, or really what it's good for in terms of educational outcomes."

The full report is available from ERIC Document Reproduction Service; P.O. Box 190; Arlington, VA 22210; order number ED 205 165; 91¢ (microfiche), $2 (paper copy).

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Mini - Glossary

Authoring Languages - High level languages with one dedicated purpose: to write instructional programs. Fewer and easier commands than languages like BASIC or Pascal. Examples include - Pilot, Tutor, etc.

Bit - A binary digit

Bugs - Problems with computer hardware or software

Byte - A string of eight binary digits, ex: (10011011), used to represent a letter or a number.

Central Processing Unit (CPU) - Also called microprocessor in a microcomputer. This is the heart of the computer which performs calculations, makes comparisons or in short, processes the information.

Computer Assisted Instruction (CAI) - Instruction delivered by computer. May be drill, tutoring, simulation, etc.

Computer Managed Instruction (CMI) - Student management programs for computers. Includes test making, test scoring, grade figuring, student records, etc.

Computer Network - Two or more computers that have the ability to exchange information.

Courseware - Computer programs used for instruction.

Debugging - Fixing problems with computer hardware or software.

Disk Drive - A peripheral device using floppy disk for storage and retrieval of programs and or data.

Documentation - The instructions for a piece of hardware or software.

Floppy Disk - A mass, external storage device made from a thin, circular piece of magnetic material, capacities range from 100K to 500K kilo bytes

Graphics Tablet or Pad - Whatever is drawn or traced on one of these tablets using a stylus or drawing arm will appear on the display screen and can be stored by the computer for later recall or modification.

Hardware - Any piece of computer equipment.

Inputs - Devices that send information or commands to the microprocessor. Examples include: Keyboards, joysticks or game buttons, graphics tablets, speech recognizers, etc.

K - Symbol representing kilobytes, actually one K equals 1024 bytes.

Languages - A set of commands that can be used to write computer programs. The central processing unit works with binary code language (e.g. 00110101) and higher level languages have commands that represent a group of binary instructions. Examples of higher level languages include: BASIC, Pascal, Fortran, Smalltalk and Logo.

Light Pen - A stylus connected to the computer with an electrical cord which can detect light on a television type screen and send a signal to the computer. It can be used to make choices from a display on the screen by touching the one you want.

Magnetic Media - Tapes, floppy disks or hard disks made of plastic and covered with a magnetic substance. Signals can be stored on the magnetic surface and the computer can read the signals later, as needed. This is the most common type of media for mass storage.

Memory - Information or instructions are stored in memory.

Operating Systems - The command set used by a computer to control its peripheral devices and the flow of information. Most microcomputer manufactures have their own type of media for mass storage.

Output - Ways in which the computer can give the results of its work e.g., displayed on television screen, printed out (hardcopy) or speech synthesis.

Random Access Memory (RAM) - Memory chips inside the microcomputer that can temporarily store information, be erased and then store something else. Also called the workspace memory.

Read Only Memory (ROM) - Memory chips inside the microcomputer that permanently store information needed by the microprocessor such as a language or graphics instructions.

Service Contract - An extended warranty. Computer repair insurance. Cost ranges from 10 to 15 percent of original hardware cost.

Software - All types of computer programs or the instructions needed by the computer to carry out a given task.

Videodisk - A plastic disk that stores many more times the information of a magnetic disk. These are scanned by a tiny laser beam so the surface does not wear out. Already used for mass memory storage for microcomputers in research projects and will be used extensively in the near future.

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USES OF MICROCOMPUTERS IN SCHOOLS

by
Glenn Fisher
School Computer Specialist

Microcomputers are being bought in increasing numbers by teachers and schools for use in the classroom. What can these machines do that makes them so attractive? What are some of their possible uses in classrooms?

Microcomputers are attractive because they offer large computing power in a small, easily transportable package which gives the user a feeling of being in control. The user is not subject to mysterious events far away at a computer center, as was the case in the past using terminals connected to time-sharing monster computers. They are also attractive because there is a large amount of SOFTWARE (computer programs) available for educational uses. Many teachers and families now have microcomputers at home, which makes them familiar.

However, the real excitement about microcomputers comes from their impact on children and on teaching. A computer in the classroom is like having an aide for the overburdened teacher. Children are excited about computers and love to use them. Computers, using well-written programs, can be facilitators for remarkable learning in children, and open up new vistas. Let's look at some of the ways computers can be used in a classroom.

COMPUTER USES IN THE CLASSROOM

Drill and practice Students not making regular progress in the classroom often make remarkable gains when using computers, allowing them to keep up, and in some cases, catch up, with their peers.

USES

Tutoring	Well-written computer programs can actually tutor students in a subject, responding to their ability and providing instruction when necessary. The computer can actually become a teacher, although it is limited by the choices written in the program.
Simulations	In a game format, students get a chance to experiment with 'models' of the real world, and see results quickly. They can run a nuclear power plant, discover the effects of advertising on sales, operate a water system, develop strategies of fighting fires or marketing a product quickly and without threat of harm to themselves or others.
Problem Solving	Computers can be used to assist in problems requiring large and complex calculations, or those where presentation of information in graphic form is helpful. They also allow changes to be made easily, and quickly display the results of any changes.
Demonstrations	Computer graphics can assist in demonstrating difficult concepts or those where animation is helpful; it is particularly useful in subjects such as geometry and sciences.
Programming	More and more jobs require some ability to understand and use computers. Programming gives students a clear idea of the limitations of computers. It is also a problem-solving activity which builds logic skills and encourages clear thinking and expression.
Games	A computer remembers the rules and only allows correct moves, allowing students to spend their energy learning strategies. Games are motivating and entertaining, and with proper selection, can be related to classroom objectives.
Word Processing	This is a useful employment skill, and has been helpful to students with physical problems with writing. Some teachers have successfully used word processing to get non-writers writing, because it is so easy to make changes and corrections.

MANAGEMENT USES OF COMPUTERS

Testing	Students can take a test, have it graded, and have statistical and diagnostic information available for the teacher.
Record keeping	Computers can quickly do many of the tedious calculations involved in record keeping, saving teacher time. They can keep track of student placement and progress, and have been used for keeping track of competencies and graduation requirements. The computer can rapidly search through records and print out students who have not completed assignments, calculate and print grades, and other such tasks.
Business management	School management tasks, such as budgeting, inventory, etc., can easily be maintained on the computer. Mailing lists can be kept up to date without having to retype entire lists.
Word processing	Schools (and teachers) do a large amount of report and letter writing; the computer can easily and quickly prepare documents and print form letters.

Management uses have an effect on the classroom, because they allow a teacher to spend more time teaching and less on management tasks.

This document was prepared using a word processor program (Apple PIE) on an Apple computer.
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COMPUTER USE IN SELF-CONTAINED CLASSROOMS

Here are some suggestions to help you get the most out of a computer if you have one, or to help you get started if you are getting one.

GET ACQUAINTED

If you haven't already spent some time with the computer, try some of the programs you plan to use and see how they work and what it can do. Using a computer is like teaching a new subject--it goes a lot smoother with some advance preparation.

LOCATION

You will be limited by the need to plug in the computer--if you have only one plug in your room, you might want to invest in a long extension cord. So you control use of the machine, it must be where you can keep an eye on it (not behind a bookcase), but it should also be out of the line of sight of most students so it does not distract them.

RULES

A computer is usually trouble-free, and a few simple rules will help keep it that way. The four suggested rules are:

1. No food or drink near the computer
2. Clean hands
3. No horseplay
4. No kibitzers (users only at your turn)

You can cut these out and tape them to the front of your computer.

SCHEDULING USE

The computer is there to help you. If it is in your way or causing problems, evaluate its role in your teaching. Don't use it when you plan whole-class instruction! You will have to decide which times are appropriate for you to have the computer available.

Educational research has shown that up to four students get the same educational benefits as one at a computer, and with several students, they can help each other and discuss what is going on. In most cases, then, you will probably want to schedule two to four students at a time at the computer.

In the classroom, computers have four basic uses, which require slightly different scheduling. The uses and suggested scheduling are:

(1) Drill and Practice--Best scheduled two--four at a time
(2) Remediation--One or two students for longer times (20-40 minutes)
(3) Enrichment--One to four on a first-come basis
(4) Simulations and Problem Solving--Two to four students at a time.

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Once you have decided on a use, you can plan how to schedule students, and inform them (starting in this corner, a table at a time; today, students listed on the board, one at a time, etc.). It takes some additional time, but I think you will find it worthwhile in smoothing out classroom operation.

Computers can help your students learn, and they can be incredibly motivating. A thoughtful plan for computer use will make life easier for you.
Computers are fun--enjoy!

COMPUTERS? Advantages and Disadvantages

Research has shown increase in motivation, learning RATE, and length of retention from computer use for as little as ten minutes a day. The total time of computer use is more important than number of sessions or the schedule that is used. For use in a classroom, here are the things to remember:

ADVANTAGES

1. With proper programs, computer use motivates students to learn and behave.
2. Under some conditions students will learn more by using a computer, and they remember it longer.
3. Computers can provide individual drill for students who need it.
4. Children with problems relating to others often function better at a computer.
5. Computers can make challenging logic games and simulations available to your classroom.
6. Computers can make your teaching more effective.
7. Computers can save you time spent on record keeping.
8. Computers can help you teach by drilling, motivating, or challenging small groups of students.
9. Computers are consistent and cannot get upset.

DISADVANTAGES

1. A computer takes your time- to plan for and schedule its use.
2. A computer requires your supervision, like any other "center" or machine would.
3. A computer can distract other students.
4. Collecting and maintaining a library of programs is expensive and time-consuming.
5. A computer can only be used by a few students at a time.
6. Computers, like other machines, sometimes do not work properly.
7. You will probably want some training to most effectively use the computer.
8. You may have to rearrange your schedule if the computer is not available when you want it.

There is no question computers can help children learn. Can they help you teach? It depends on you.

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INTRODUCING THE COMPUTER TO YOUR CLASS

Directions for a teacher to use with a group of students.

1. Previous to the demonstration, load and use a tape appropriate to your class (easy & fun) so you are familiar with it.

2. At least 15 mins. prior (at recess or lunch), set up the computer and load the program. Run the program to be sure it works. Restart the program so it will be ready for your students (usually you press BREAK (RUN/STOP, RESET), then type RUN and press RETURN (ENTER).)

3. Seat the students so they can all see the screen.

4. Introduce your brand of computer.
 (with young kids, they like to say "Hello, PET" or whatever's appropriate)

5. If the students have had no prior introduction, show them the different parts of the computer:
    keyboard, t.v. screen (monitor)
    if you have them: tape recorder, disk drive, printer
   (continued)

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6. Explain what a computer can do (briefly, depending on level and interest). This can be done another time, since it doesn't require a computer.
   a) It can add numbers very fast (in 1 second, it can add as many numbers as a class of students could add in a whole school day).
   b) It can compare numbers and do something as a result--this makes a computer act "smart" or seem to "think". (example: if your score is less than 3, add 1 to the total score.)
   c) It can store huge amounts of information and get it back very quickly: a tape or floppy disk can store all the words in a 60 page book; some large computers can store all the words in all the books in a library in their memory, and find any page in less than a second!
   d) It can follow directions written for it in a language called BASIC.

7. Set down rules for using the computer:
   No food or drink, ever
   Clean hands
   Only use if its your turn
   No horseplay

8. Teach students how to use the program you've picked (here's a sample; actual instructions will vary depending on the program).
   "What is the computer asking?"(your name)
   Select a student to type in his/her name
   "Nothing is happening. why not?"
   (if students don't already know, have someone come and press RETURN (or ENTER).
   Calling on different students, go through a sample problem and response.
   Review, "What do you press to tell the computer that you're done?" (Press RETURN)

If it is appropriate, review rules or operation once more, then assign students to use the computer, and take the rest of the class off for an interesting activity (or if you have a small group, let them stay & watch), as groups of 2-4 students take their turns.

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SOFTWARE CATALOGS & INFORMATION

These catalogs list software for several computers from many different software companies. Some catalogs simply print advertising material from the seller; others review material themselves. Prices vary as listed. "Ordering service" means you must order through them as they do not list suppliers' addresses. However, most directories list vendors' names.

APPLICATIONS SOFTWARE SOURCEBOOK Radio Shack (TRS-80)
Box 17400, Ft. Worth, TX 76102 or local store
$2.95, vendors pay to list their description

COMMODORE SOFTWARE ENCYCLOPEDIA Commodore Buss. Mach.
Syst. Marketing Group, 681 Moore Rd.,
King of Prussia, PA 19406/dealers; $9.95
lists vendors' description

EDUCATIONAL SOFTWARE DIRECTORY Sterling Swift
P.O. Box 188, Manchaca, TX 78652, $11.95
APPLE ONLY; good product description

K-12 MICROMEDIA P.O. Box 17
Valley Cottage, N.Y. 10989, $2.95
extensive list, incl. books; ordering service

MARCK 280 Linden Ave., Branford CT 06082
reviews programs; ordering service

OPPORTUNITIES FOR LEARNING 8950 Lurline Ave.
Dpt. GE390, Chatsworth, CA 91311
short descriptions; does not list vendor
ordering service (free)

QUEUE 5 Chapel Hill, Fairfield, CT 06432
reviews; ordering service; specify computer; $8.95

SCHOLASTIC 904 Sylvan Ave., Englewood Cliffs, N.J. 07632
extensive list, fair description; ordering service
(does not list vendor); free

SCHOOL MICROWARE Dresden Assoc., Box 246
Dresden ME 04342; $20/yr (4 issues)
lists vendors' addresses

SOFTWARE CATALOGS

Some projects which have produced software are:

CONDUIT	Box 388, Iowa City, IA 52244 center to disseminate H.S. and college progrs.
MEAN	256 N. Washington St. Falls Church, VA 22046 guidance, special education software
MECC	2550 Broadway, St. Paul, MN 55113 Apple programs, all levels; teacher's guides
Project LOCAL	200 Nahatan St., Westwood CT 02090

Some magazines carry ads for and occassionally publish reviews of educational software; they are good sources of general information about the computers and computer use in education. For more information, request the handout titled "Computer Magazines."

Users groups and their newsletters (CUE, Apple Core, etc.) are good sources of information about software. Some publish reviews of software. Request the handout "East Bay Users Groups" for information about local groups for popular computers.

All teachers should join CUE (Computer Using Educators) as the local group which provides information on software and computer-related activities in the schools. Membership is $6/yr. (checks only) to:

C.U.E.
Don McKell, Treasurer
Independence High School
1776 Education Park Drive
San Jose, CA 95133

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SOURCES OF REVIEWS OF SOFTWARE

The sources listed below provide actual reviews of software, as opposed to descriptive listings. The source of the reviews is given with each source. The sources are listed in approximate order of usefulness. Where possible, the number of reviews is also given.

MACUL JOURNAL
Michigan Assn. for Computer Users in Learning
c/o Lary Smith
Wayne Intermediate School District
33500 Van Born Rd.
Wayne, MI 48184
$5
260 programs reviewed in 1980 and 1981 journals
Review includes description, source, and ratings of polish, use of computer capabilities, written documentation, ease of use, and educational value. Reviewer is Jim Winebrener, Computer Ed. Specialist for the Livorna Public Schools and 12 year veteran of high school math and computer science teaching.

SCHOOL MICROWARE REVIEWS
Dresden School Microware
Box 246
Dresden, ME, 04342
$30 for 4 issues (1 year)
50 programs per issue (approx.), first issue Sept. 1981.
Review includes description, source, comprehensive descriptive review comments in the areas of documentation in-program instructions, student-computer dialog, educational aspects, use of computer capabilities, and miscellaneous concerns. The reviewers assign numerical values which are used to compute an overall rating (0 to 10). Reviews are done by School Microware staff, and by teachers in the field.

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SOFTWARE REVIEWS

THE JOURNAL OF COURSEWARE REVIEW (APPLE only)
The Apple Foundation
20863 Stevens Creek Boulevard
Building B-2, Suite A-1
Cupertino, CA 95014
$5.95/issue (just one so far)
17 programs reviewed in Issue #1
Reviews are descriptive prose, giving a good overall feeling for the program, while describing it and dealing with specific strengths and weaknesses. There is no set evaluation guide, but generally the topics given above are covered. Reviews are by experts and computer users in the subject and grade area of the program.

PEELINGS-2
945 Brook Circle, Dpt. C
Las Cruces, N.M. 88001
$15/yr.
This magazine is entirely devoted to reviews of Apple software.

MIDNIGHT SOFTWARE GAZETTE (PET only)
Central Illinois PET Users Group
635 Maple Ct.
Mt. Zion, IL 62549
Send stamped, self-addressed envelope for each issue, and donation. Reviews are very informal, ranging from 1 sentence to a paragraph, by members of CIPUG.

MicroSIFT
Northwest Regional Educational Laboratory
300 S.W. Sixth Ave., Portland, OR 97204
This big NSF funded project has published the first reviews. They are exceptionally thorough.

MicroSIFT, and other groups and agencies are beginning to coordinate review efforts, but have published little. Many computer education publications carry reviews of software, often done in article/descriptive style by teachers.

The San Mateo County Office of Education has available a simple, comprehensive software review form. They are collecting reviews using this form for publication through Computer Using Educators (CUE). NCTM publishes a booklet titled "Guidelines for Evaluating Computerized Instructional Materials." (1906 Association Dr., Reston, VA 22091). Dresden also has a very comprehensive review form. The Alameda County Superintendent of Schools Office has no publication containing reviews; the present intent is to publish them through the CUE Newsletter or other educational publications. Some other county offices also software review projects underway.

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11/81, rev. 2/82

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CHOOSING A MICROCOMPUTER

Which One Should I Buy?

You'll be spending a lot of money. It's important you make a good choice so the computer you buy meets your needs and expectations, and gets used. The criteria listed for selection are approximately in order of importance.

1. WHAT IS YOUR USE?

Are you teaching programming, or using it for word processing, drill, or keeping track of grades or competencies? Some uses are available on only a particular microcomputer; other tasks can be done by any model. You must be sure the one you choose supports your use. If you plan to set up a computer lab, you also will need a network to load programs into all your machines.

2. WHAT ARE OTHERS IN YOUR DISTRICT USING?

This is important because it provides you with a source of support and information, and leverage. A district with a mixture of machines will be unable to provide adequate support to all of them. The ability to interchange parts, to share information on uses and problems, and to set up common libraries of software, are important as you start using your computer.

WHAT SOFTWARE IS AVAILABLE?

If you want to write your own programs, or simply teach programming, this is not a factor. For the other 95% of uses, it is crucial. Check through a computer store or software catalog what is available for the uses you plan so you don't end up with a $1000 paperweight.

4. WHAT CAN YOU AFFORD?

If you only have $1000, it's ridiculous to buy part of a $2000 computer and hope to get money to buy the rest later. For computer literacy or drill, your goal may be to get as many students as possible to the computer; many inexpensive computers will be your choice. However, if you need a business type word processor for a business class, you probably want to buy a specific word processor rather than try and make another computer act like something it isn't.

COMPARING POPULAR MICROCOMPUTERS

Name	Cost of* System	Software available	Advantages	Disadvantages
APPLE	16K, tape b&w $1500.	much	Author languages, PASCAL, compatability with CP/M and time-share, LOGO. Hi-resolution color graphics, sound and speech capability	programmer-oriented; expensive; tape-load problems; use requires memorizing key combinations for editing.
ATARI	8K, tape, b&w, $1000, 16K, disc, color, $2000	little	second-generation; sound, hi-resolution color graphics, plug-in modules, PILOT	programmer-oriented; short time on market-few users and little software, pieces

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COMPARING POPULAR MICROCOMPUTERS (continuation)

Name	Cost of * System	Software available	Advantages	Disadvantages
Ohio Scientific	8K, tape, b&w $600 32K, disc, color $2000	little	8K machine cheap; fast basic.	Few users and little software.
PET	16K, tape b&w $1000	fair	easy to use, user-oriented; one case-portability; very clear screen; editing ease; reliability of tape unit.	Lack of service support, policy changes by Commodore, non-standard key placement on keyboard.
Radio Shack TRS-80	16K, tape, b&w, $1000	much	Model III one-case-portability, fast tape speed & reliability: service and number of outlets; Company policy supporting education.	Incompatability of Level I & II & color computer; programmer-oriented; poor graphics, screen editing requires memorizing codes; Mod I many pieces, trouble reading & saving tape.
Sinclair	1K, tape b&w $400	none	cheap	Inflexible, no programs, small memory, flat keyboard.
Texas Instruments 2974	16K, tape, b&w $1500	very little	speech capability plug-in modules, LOGO	Non-standard keyboard size, new to market-few users and little software.

* Some computers (Apple, Atari, Sinclair) come only as a keyboard/computer; tape recorder or disc and TV must also be bought. Note that 16k with tape and b & w TV is within a few dollars of $1000 for most machines.

+ Programmer-oriented - The machine is designed for use by programmer; usually requires additional steps to use programs or program in BASIC: additional memorization of codes to operate.

What Should I Budget For Software?

When planning to purchase a computer for any use except programming, you must also plan to buy software (programs). Depending on your use, this can cost you from $100 to more than $1000.

For a single subject (decimals, physics, Spanish), $200 to $500 is a reasonable amount to spend. For multiple subject use (elementary, school, other), $500-$1000 will be necessary to establish a quality, useful library of programs.

Why so much? You've invested a lot in your computer. Poor quality programs, or little choice, will lead to dissatisfaction and lack of use. There are lots of programs available in the public domain, but they tend to be low quality and mostly games. You'll still spend money on tapes or discs, plus time to copy them, so they are not free.

For more information on computers or software, to arrange a demonstration at the County Office, or a visit to your school, contact:

Glenn Fisher, School Computer Specialist
Alameda County Superintendent of Schools Office
685 A Street
Hayward, CA 94541
(415) 881-6083

GF:dap

BASIC SKILLS IMPROVEMENT: TOPICS OF INTEREST

FOCUS: SPEAKING AND WRITING

Oral Communication

The new commitment to instruction in oral communication is emphasized by recent state and federal mandates—the minimum competency and basic skills requirements in various states and the ESEA Title II legislation. Basic Skills Improvement Program staff realized the importance of oral communication to today's students, and for that reason her program "urged its inclusion in the Title II legislation," says Shirley Jackson, Director.

However, it is not just legislative mandates that have prompted educators to include oral communication—speaking and listening—in the curriculum for all students. As William Work, executive secretary of the 5,000-member Speech Communication Association, has noted, "We are becoming a more oral kind of society," and Professor Sara Lundsteen of North Texas State University, Denton, observes that "speaking and listening are now being recognized as important" in the world of business.

Both Work and Lundsteen are concerned, however, about the "narrow view" of speaking and listening that is held in most schools. Lundsteen emphasizes that school districts should not separate speaking and listening in competency-based programs, and Work urges schools to view language and oral exchange as critical tools for orderly, creative thought and problem solving.

How, then, should oral communication be defined in order to reflect the importance that is now being attached to it? "The description of the basic skills in ESEA Title II as 'reading and mathematics and effective communication, both written and oral,' reflects an expanded view of what is basic in education," writes Barbara Lieb-Brilhart, National Institute of Education, in *Resources for Assessment in Communication,* published by the Speech Communication Association. "Increasing evidence indicates oral language skills are central to the development of other language skills and to achievement in other areas of the curriculum," she continues.

Lieb-Brilhart identifies some attitudes that need to change if oral communication skills are to be improved. In her view, teachers must come to view oral communication instruction as important in its own right, not just as a means of teaching reading and writing skills. Educators must learn to distinguish oral language instruction from oral communication instruction. Such activities as listening to stories and reading aloud develop some critical language skills, but they do little to develop the skills of interaction. Finally, mere exposure to speaking and listening experiences is not enough; teachers must explain the principles of effective communication to children as they move through the curriculum.

Instruction in Oral Communication

Schools that accept the broader definition of oral communication and wish to promote it may have to make an effort to locate suitable program designs, materials, and tests. According to Nancy Mead, who has worked with both the Education Commission of the States and the National Assessment of Educational Progress, "appropriate materials do exist," but they may be hard to find, as they have been catalogued under a variety of subject areas, and they are sometimes only found in documents that are not widely disseminated."

One good starting point for program design, Mead said in remarks to the Washington, D.C. conference for Title II grantees last September, is the set of standards adopted in 1979 by the Speech Communication Association (SCA) and the American Speech-Language-Hearing Association (ASHA). These standards are based on some broad assumptions:

- Oral communication competence varies among speakers of the same language, and it is independent of use of a given dialect or level of language.
- Oral communication skills can be improved by instruction.
- Instruction in oral communication should aim to increase the number and effectiveness of students' listening and speaking skills.

(continued)

- **Instruction in oral communication should emphasize** the interactive nature of speaking **and listening; address students'** everyday communication needs; use the classroom as a practical learning environment; address a whole developmental continuum of skills, preschool through adult; and use parents, support personnel, and technology to promote its goals.

The SCA-ASHA standards define the characteristics of effective oral communication programs. (For the complete list, see *Resources for Assessment in Communication*, described in the References below.) In regard to teaching and learning, effective oral communication programs

- are based on current theory and research in speech and language development, psycholinguistics, rhetorical and communication theory, communication disorders, speech science and related fields of study;
- are a clearly identifiable part of the curriculum;
- systematically relate instruction in oral communication to instruction in reading, writing, and the various content areas;
- use students' relevant academic, personal, and social experiences as their core subject matter;
- provide a wide range of speaking and listening experiences in order to develop skills appropriate to a range of situations, purposes, audiences, communication forms, and speaking styles;
- provide class time for systematic instruction in such skills as critical listening; selecting, arranging, and presenting messages; giving and receiving constructive feedback; and nonverbal communication;
- use classroom instruction, cocurricular activities, and speech-language pathology and audiology services to promote development of adequate and appropriate language, articulation, voice, fluency, and listening skills necessary for success in educational, career, and social situations;
- encourage the reticent student (that is, one who is excessively fearful in speaking situations) to participate in oral communication and provide activities appropriate to that end.

In regard to support, such programs

- use individuals adequately trained in oral communication and/or communication disorders, as evidenced by appropriate certification, to provide instruction;
- involve those who provide instruction in continuing education on relevant theories and research;
- encourage those who provide instruction to participate in conventions, meetings, publications, and other activities of communication professionals;
- train classroom teachers to identify and refer students who lack adequate listening and speaking skills or who are reticent to qualified individuals;
- inform teachers in all curriculum areas on appropriate methods for using oral communication to facilitate instruction in their subject area and on using the subject matter in that area to improve students' oral communication skills;
- promote active involvement by parents and community groups in program activities;
- obtain and use appropriate instructional materials, equipment, and facilities.

In regard to assessment and evaluation, such programs

- originate in schoolwide assessment of students' speaking and listening needs, as determined by qualified personnel using evaluation tools appropriate for both the skills to be assessed and the educational levels of the students being assessed;
- base evaluation of students' progress on a variety of data, including direct observation, self-evaluation, listener's responses to messages, and formal tests;
- use evaluation to encourage, rather than to discourage, students' desires to communicate by emphasizing behaviors that students can improve;
- base evaluation of the total program on achievement of acceptable levels of oral communication skill as determined by continuous monitoring of student progress in speaking and listening and by use of standardized tests, criterion-referenced tests, audience-based rating scales, and other appropriate instruments.

One new resource, *Teaching Speaking and Listening Skills in the Elementary and Secondary Schools* (see the References below for details), developed by Kenneth Brown for the Massachusetts Department of Education, defines general foundations for speaking and listening and describes 100 resources for program development. While geared to Massachusetts basic skills objectives, this booklet could be useful to anyone in search of ideas to improve a program.

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Assessment of Oral Communication

Schools that have launched a program in oral communication will also need to locate and/or develop assessment instruments. According to Kenneth Brown in a state-of-the-art report compiled in 1979 for the Massachusetts Department of Education, assessment in this area is a complex issue, because competence in oral communication depends on many factors: the purposes of speaker and listener; the subject being talked about; and the attitudes, experiences, maturity, skills, and knowledge of speaker and listener alike.

According to Nancy Mead, whose work in assessment of oral communication skills will be valuable to anyone interested in this issue, there are some long-established commercial tests for both elementary and secondary levels in listening skills, but none as yet in speaking skills. While NAEP does not assess oral communication, it conducted a pilot study in 1977 with SCA to determine the feasibility of assessing oral skills among 17-year-olds. In cooperation with communication experts, the pilot study identified testable skills and developed test items in five categories: informing, controlling, sharing feelings, ritualizing, and communication attitudes. The test items were field tested at four sites, and the results were analyzed by a panel of experts, who selected the best items.

One concern shared by both Mead and Maria Ramirez, Assistant Commissioner for General Education and Curricular Services, New York State Education Department, is a series of issues associated with testing of minority students. According to Ramirez, "Tests of skills knowledge must be given in a student's first—that is, most proficient—language." In Mead's opinion, test items should measure actual communication competencies, not extraneous factors that tap racial and ethnic differences.

The Speech Communication Association has issued some useful guidelines for evaluating published and unpublished instruments and procedures for assessing the speaking and listening skills of children and adults. These guidelines appear in ***Assessing Functional Communication***.

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References

Speech Communication Association (SCA), 5105 Backlick Road, Annandale, Va. 22003: *Resources for Assessment in Communication* and *SCA Guidelines for Minimal Competencies in Speaking and Listening for High School Graduates* (single copies available free). The former contains an analysis of effective oral communication programs by Barbara Lieb-Brilhart, a bibliography on assessment of oral communication skills by Kenneth Brown, and a list of resource persons.

ERIC Clearinghouse on Reading and Communication Skills, housed at the National Council of Teachers of English, 1111 Kenyon Road, Urbana, Ill. 61801, collects, analyzes, and makes available educational information on English, journalism, reading, theater, and speech. For information on a specific topic, call Holly O'Donnell, Director of User Services, at (217) 328-3870.

Clearinghouse for Applied Performance Testing (CAPT), Northwest Regional Educational Laboratory, 300 S.W. Sixth Avenue, Portland, Ore. 97204: The November 1980 issue of *Captrends*, devoted to assessment of oral communication, is available free. To receive *Captrends* regularly, send your name, title, and address to CAPT at the address above.

Nancy Mead, National Assessment of Educational Progress (NAEP), Education Commission of the States, 1860 Lincoln Street, Denver, Colo. 80295: Papers may be obtained through the Regional Technical Assistance Centers.

Assessing Functional Communication, by Carl Larson, Phil Backlund, Mark Redmond, and Alton Barbour: Available from the Speech Communication Association, $5.50, this work reviews methodological and conceptual issues in the assessment of speaking and listening; identifies barriers to effective listening; provides basic information on test reliability; and describes instruments, observation and category systems, and general assessment procedures.

Listening Instruction, by Andrew D. Wolvin and Carolyn Gwynn Coakley: Available from the Speech Communication Association or from the National Council of Teachers of English, $2.50, this work describes 38 exercises that can be used to build effective listening skills.

Listening: Its Impact on Reading and the Other Language Arts, by Sara Lundsteen: Available from the National Council of Teachers of English, $6, this resource identifies the links between reading and listening and offers advice on testing, criteria for judging instructional materials in this area, a sampling of existing listening programs, and checklists of listening activities.

Teaching Speaking and Listening Skills in the Elementary and Secondary Schools, by Kenneth Brown: Free from the Massachusetts Dissemination Project, State Department of Education, 31 St. James Avenue, Room 614, Boston, Mass. 02116.

Bureau of Research and Assessment, Massachusetts Department of Education, *State of the Art and Recommendations for Instrument Development*, in two volumes, available through ERIC: ED 178 969 (Volume I) and ED 178 970 (Volume II).

Writing Skills of Black Teenagers Improve

Between 10 and 25 percent of American students have "very serious problems with writing," according to the National Assessment of Educational Progress (NAEP), which recently published the findings of a 10-year assessment of students' writing skills. However, the federally financed study also showed that the skills of black teenagers improved on most kinds of writing tasks.

The study collected responses to a variety of writing tasks from representative national samples of students. Students' attitudes to writing were also surveyed. Three groups of students—9-, 13-, and 17-year-olds—were each assessed three times between 1969 and 1979. Here are some findings:

- In the most recent assessment, approximately 66 percent of the 9-year-olds said that they enjoyed writing, compared to 59 percent of the 13-year-olds and 53 percent of the 17-year-olds.
- In the most recent assessment, the 13- and 17-year-olds reported limited instruction and assignments in writing. Only 13 percent of the younger group and 34 percent of the older group reported that they spent one-third of their time in English class on instruction in writing.
- Although they still perform below the national level, 17-year-olds from economically disadvantaged urban areas improved each time they were assessed.

No significant changes in the overall quality of papers written by 9-year-olds took place between 1969 and 1979. A 6 percent increase in the number of better papers written by this age group in 1979 suggests that their writing skills have improved. However, a slight increase in the number of marginal papers written by 9-year-olds in response to the expressive essay and persuasive letter tasks was also found.

One disturbing trend revealed by the assessment was a significant decline between 1969 and 1979 in the quality of descriptive essays and persuasive letters written by 13-year-olds.

NAEP concluded that both the 9- and 13-year-olds had not improved between the assessment periods in the mechanical aspects of writing. The most common errors of 13-year-olds, for example, were in spelling, punctuation, and awkward sentences.

NAEP found no significant changes in the overall quality of papers written by 17-year-olds between 1969 and 1979. However, there was a 6 percent decline in the number of better essays written by this age group.

Why, Why, Why?

Why do students have problems with writing? More than a dozen reasons were offered by analysts and reviewers who participated in the 10-year assessment of students' writing skills carried out by the National Assessment of Educational Progress (NAEP). Among them:

- Many young people do not understand the conventions of written language.
- Respect for the written word has declined.
- The influence of television.
- It is difficult to learn to write well.
- Teacher training is inadequate.
- The minimum competency movement often breaks reading and writing into bits.
- Some proponents of the "basics" movement emphasize mechanics and grammar over writing.
- Budgetary cutbacks in schools.
- Major publishers have been slow to incorporate research findings and useful practical information on writing into textbooks.
- The education system is geared to large-group instruction, while writing requires much one-to-one instruction.

TIPS: How to Improve Writing

Consultants to the National Assessment of Educational Progress cited many things that schools can do to improve student writing:

- ✓ Teachers must participate more in workshops and inservice programs on writing.
- ✓ Writing labs, not remedial writing courses, are needed, and they should give students opportunities to work with whole pieces of writing.
- ✓ More attention should be paid to persuasive writing and to complex thinking skills.
- ✓ Teachers should "hook" the 9-year-olds on writing by assigning writing suitable to their age and interests.
- ✓ Teachers should build on youngsters' solid grasp of oral language.
- ✓ Students must practice writing.
- ✓ Assignments should be structured so that writing becomes discovery instead of regurgitation.
- ✓ Students should receive constructive feedback on what they write.
- ✓ Students should be taught skills in prewriting, composing, and editing.
- ✓ Writing should be integrated into all activities.

Results of the NAEP assessment are contained in three volumes: *Writing Achievement, 1969–79: Volume I—17-Year-Olds,* Report 10-W-01, $6.80; *Writing Achievement; 1969–79: Volume II—13-Year-Olds,* Report 10-W-02, $6.40; and *Writing Achievement, 1969–79: Volume III—9-Year-Olds,* Report 10-W-03, $5.80. Order from the National Assessment Distribution Center, 700 Lincoln Tower, 1860 Lincoln Street, Denver, Colo. 80295.

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State Activities in Speaking and Listening

Current state activities in the area of speaking and listening include the following:

In **Massachusetts,** local school districts are working to implement a basic skills improvement policy approved by the State Board of Education in January 1979. Districts must include 11 listening and 14 speaking skills in basic skills programs. Students must be tested once in grades 1-3, once in grades 4-6, and once in high school. At the elementary level, schools may establish their own evaluation procedures. Secondary schools may use a state-developed instrument, commercially available instruments approved by the State Department of Education, or locally developed evaluation instruments approved by the Department.

Massachusetts districts have until the end of the 1981-82 school year to submit plans for testing listening skills. Assessment of speaking, however, has been postponed for three years to allow for the development of suitable instruments.

In **Michigan,** the State Department of Education developed objectives for speaking and listening in 1975-76. Its listening tests are available free to districts nationwide on a single-copy basis, as are some listening instruction materials. Contact Ed Roeber, Supervisor, MEAP, State Department of Education, 620 Michigan National Tower, P.O. Box 30008, Lansing, Mich. 48909.

Michigan began to use the listening tests with students in grades 4 and 7 in 1978 and with students in grade 10 in 1979. One general finding: Students who do well in listening also do well in reading.

The state has also developed prototype items to assess speaking skills, which, Roeber says, "we hope to be able to edit into tests soon." It is envisioned that a variety of means will be used to assess speaking skills, including videotapes, pantomiming/role playing, and public speaking.

Vermont includes seven speaking and three listening competencies in its basic skills requirements. Assessment of these competencies is accomplished by three means: reliance on teacher judgment, records maintained by teachers, and a state record-keeping and validation system. Speaking and listening skills are evaluated by the teacher, who asks students to respond orally to a variety of situations. This year, students must achieve the basic competencies in order to graduate.

Activity in other states ranges from legislative mandates for the assessment of oral communication to state plans requiring one or more of the following: development of assessment instruments, training for teachers in the assessment of oral communication, and development of guidelines for speaking and listening activities in the classroom. Many of these activities are reported in a survey of states conducted late last year by Philip Backlund of Central Washington University, Ellensburg. Brief descriptions follow:

Hawaii: Specific performance expectations have been developed in language arts, including many related to speaking, listening, and nonverbal communication. The Oral Communication Test for Essential Competency, a rating scale similar to the one developed for use in Massachusetts, has been drafted and field tested, with further development scheduled for the current school year.

Illinois: A task force was formed to revise the state's basic skills plan. The plan will include guidelines for speaking and listening and assessment procedures that teachers can use in the classroom.

Iowa: Plans are under way to train teachers how to assess oral communication, math, reading, and writing.

Maine: The State Department of Education is developing a list of competencies in all areas, including speaking and listening. By 1982, each district must have a written plan for student achievement of basic competencies.

Nevada: An instrument to assess oral communication is to be selected by May, and yearly assessment is to begin by October.

Pennsylvania: The state-published "Speech in the Classroom" includes a set of rating scales to help classroom teachers to identify areas for instructional development in speaking skills.

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South Dakota: The director of the state language arts program developed a "Language Arts Curriculum Guide for K-12," which suggests objectives and corresponding competencies by grade level for decoding (listening and reading) and encoding (spelling and writing).

Utah: A program for testing basic skills has been refined and adopted statewide. Four "life competencies" are applied to six basic skills: reading, writing, speaking, listening, computation, and problem solving.

Note: For more information about survey findings, contact Philip Backlund at the Communication Department, Central Washington University, Ellensburg, Wash. 98926.

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FOCUS: WRITING
Some Issues in Instruction and Assessment

Why is writing important? What is good writing? How should writing be taught? How should writing be assessed? Instruction in writing and assessment of writing skills have been the subject of much discussion in recent years, but there is considerable agreement on the answers to these questions.

Why is writing important? There are both public reasons and personal reasons, as the "Standards for Basic Skills Writing Programs" prepared in 1979 by the National Council of Teachers of English recognize: "Writing serves both public and personal needs of students." One compelling personal reason was well expressed by a sixteen-year-old girl: "I write so that I can understand." From this perspective, writing is a means of discovery, fundamental to the process of learning. The public reasons are numerous. Foremost among them is that voiced by Robert Gundlach (Northwestern University) at the March 1981 conference of State Basic Skills Coordinators: Skill in handling the writing process makes the individual child more in control of the job market and the world.

What is good writing? Good writing is both a product and a process. In the past, the product received most of the attention, but the process has begun to come into its own—to the benefit of instruction, in the opinion of many. However, there is more than one view of the process. According to NCTE, the writing process "requires the writer to cope with . . . *tone, form, purpose,* [and] *possible audience.*" In the view of some experts, this process is recursive; that is, it involves several stages: gathering and organizing information ("prewriting"), making one or more drafts, revising and editing each draft, and producing a final version. While this is not the only way of producing good writing, it has proved to be useful for the purposes of instruction.

As NCTE standards suggest, the writing process involves a purpose, and many authorities associate good writing with the writer's clear view of his or her purpose. A number of terms have been applied to the broad range of purposes that writers can have: *describing, narrating, expressing, persuading, explaining,* and *reasoning* are among them.

As for the product, many hold that good writing is characterized by coherence, marshalling of supporting facts or statements, and control of mechanics, such as agreement of subject and verb. However, it is clear that the second characteristic is not typical of creative writing, which has norms of its own. Also, in the view of many, good writing is not synonymous with the absence of errors in spelling or punctuation. A piece of writing that achieves its writer's purpose is effective writing, and many argue that effective writing is good writing.

In light of these views, **how should writing be taught?** There is general agreement that reading and writing skills are related. Further, there is evidence that writing can help students to "sort out their minds" in other fields, such as mathematics and science. For these reasons, writing should be a part of instruction in all subjects, states Anthony Petrosky (University of Pittsburgh), and instruction should not be limited to drills in grammar and mechanics.

It is implicit in the view of instruction stated by Petrosky that assessment should not be restricted to occasional tests. As Robert Gundlach puts it, "Testing should serve the purposes of instruction." Gundlach speaks for the current view that ongoing assessment, individual diagnosis, and regular feedback on students' writing are crucial for increasing their writing proficiency. To become good writers, students must produce many samples of writing in all the modes of discourse, and testing should be an integral part of every piece of writing.

These views are shared by many experts. Donald Graves (University of New Hampshire) has written that students should produce at least 75 pages of drafts in three months' time, and the process should involve frequent review. Drafts should be examined by the teacher or peers, discussed with the student writer, and then revised.

Assignments should be as "real" as possible, because students cannot be expected to perform well if they know that what they are asked to do could never occur, at least to them. "Make sure that you and the kids know what you're after," states Christine San Jose (former director, West Genesee/Syracuse

University Teaching Center). If students are aware of the audience, purpose, and situation for the writing as they write, a careful reading of each assignment can lead to an understanding of their strengths and weaknesses and indicate areas where help is needed.

How should writing be assessed? Those concerned with diagnosis and assessment should take two facts into account: Individual students approach the various modes of discourse with varying levels of confidence and ability, and some modes appear to be more easily mastered than others. As already noted, some experts argue that the functional effectiveness of a piece of writing matters more than its social effectiveness. According to Roger Shuy (Georgetown University) and Evans Alloway (Educational Testing Service), whether the writing does what it is supposed to do—describe, persuade, explain, express an emotion—is more important than the level of the English used. Assessment of writing by children who use nonstandard dialects or who are learning English as a second language has to take this into account.

Those who must assess students' writing skills have often relied on multiple-choice tests, which have limited use for this purpose. Multiple-choice tests should never be used as a direct measure of writing skill. Indeed, in the opinion of Richard Lloyd-Jones (University of Iowa), while multiple-choice tests are relatively inexpensive to administer and easy to score, they indicate little more than whether the test taker can recognize an error.

A number of examination and scoring systems have been developed for the assessment of writing samples, including the holistic, primary trait, and analytic systems. Each has its advocates and uses. However, these systems are not mutually exclusive; it is not only possible but appropriate to use several different scoring systems to assess the same writing sample.

References

Nancy Bridgeford and Richard J. Stiggins, *A Consumer's Guide to Writing Assessment;* summer 1981, $10.95, Clearinghouse for Applied Performance Testing (CAPT), Northwest Regional Educational Laboratory, 300 S.W. Sixth, Portland, OR 97204. Writing samples versus objective tests; 250 writing assessment specialists willing to consult; descriptions of 50 published language proficiency tests.

Clearinghouse for Applied Performance Testing (CAPT), *Writing Assessment for the 80s;* 1980, to be available in ERIC. Papers on writing assessment and its implications for teaching.

Charles R. Cooper and Lee Odell (Eds.), *Evaluating Writing: Describing, Measuring, Judging;* 1977, $5.75, National Council of Teachers of English, 1111 Kenyon Road, Urbana, IL 61801. Using the various scoring procedures for evaluation; measuring changes in intellectual processes; self- and peer evaluation.

Paul B. Diederich, *Measuring Growth in English;* 1974, $4.25, NCTE. Ways of improving the reliability of scoring procedures for writing samples.

Ann Humes (Ed.), *Moving Between Practice and Research in Writing;* 1980, $5.00, SWRL Educational Research and Development, 4665 Lampson Avenue, Los Alamitos, CA 90720. Papers from a 1980 NIE-FIPSE grantee workshop on topics in writing instruction and assessment.

Carl H. Klaus and others, *Composing Childhood Experience: An Approach to Writing and Learning in the Elementary Grades;* 1979, $4.00, CEMREL, Inc., 3120 59th Street, St. Louis, MO 63139. Expressive writing as the foundation for teaching other types of writing; primary trait scoring for expressive writing; using results for evaluation.

James Moffett, *Teaching the Universe of Discourse;* 1968, $9.25, Houghton-Mifflin, 2 Park Street, Boston, MA 02107. What "discourse" is; how one learns it; considerations for teaching.

Miles Myers, *A Procedure for Writing Assessment and Holistic Scoring;* 1981, $4.50, NCTE. How writing has been assessed; holistic methods for scoring writing samples; analysis of results with primary trait, analytic, and discourse scoring methods.

National Council of Teachers of English, "Standards for Basic Skills Writing Programs," *SLATE Starter Sheet,* volume 4, number 2 (April 1979); single copies available free (enclose self-addressed stamped envelope) from NCTE. Guidelines for teaching and learning, support, and program evaluation.

Lee Odell and Charles R. Cooper, "Procedures for Evaluating Writing: Assumptions and Needed Research," *College English*, volume 42, number 1 (September 1980), pages 35–43. Descriptions and evaluations of four procedures for scoring writing samples.

Mina P. Shaughnessy, *Errors and Expectations: A Guide for the Teacher of Basic Writing;* 1977, $5.95, Oxford University Press, 16–00 Pollitt Drive, Fair Lawn, NJ 07410. Concrete, usable advice on teaching writing, based on the author's experiences in the classroom.

Vicki Spandel, *Classroom Applications of Writing Assessment: A Teacher's Handbook;* summer 1981, $4.95, Northwest Educational Research Laboratory, 300 S.W. Sixth, Portland, OR 97204. Training for classroom teachers in holistic, analytic, and primary trait scoring methods, with techniques for using as part of the teaching process.

Vicki Spandel and Richard J. Stiggins, *Direct Measures of Writing Skill: Issues and Applications;* 1980, $3.75, Northwest Regional Educational Laboratory. Descriptions of five scoring methods; use of tests; profiles of writing assessment methods and instruments used in selected states.

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Teaching Writing through Word Processing

The children of a 3,000-year-old culture may soon come face to face with twentieth century technology as the result of a cross-project workshop held in February. Jon Madian, writer-in-residence in the Yucaipa (California) Joint Unified School District traveled to the Rough Rock (Arizona) Demonstration School to work with project director and elementary school principal Mark Sorensen's Navajo students.

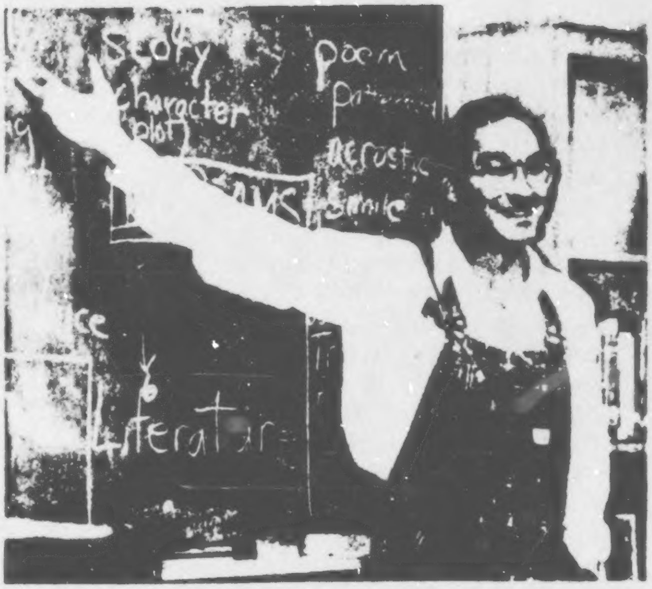
The school, established in 1966, is located on a Navajo reservation and was the first bilingual, bicultural native American school in the country. To help his students develop written literature from the stories of an oral tradition that is centuries old, Sorensen has ordered word processing equipment. His decision was influenced by the success of Madian's Yucaipa project and a commitment to educate Indian children for the future.

"We have been very successful in helping the students develop basic skills in all four areas. We have adapted two validated programs to fit our bilingual, bicultural situation," Sorensen said. "But the teachers and I particularly want the students to write about themselves and their experiences. The Navajo culture has a message for the Anglo culture, and greater mutual awareness is important. Unless the Navajos develop their own literature, it will be misrepresented."

Sorensen wants his students to be literate in both English and the Navajo language, which has been a written language for only 40 years. There is a lack of material to help Indians understand their own culture, and he realizes the importance of encouraging youngsters to create stories based on Navajo legends as well as to express their own contemporary experiences. Some Indians feel the oral tradition is sacred, and the stories should not be written. For this reason, some of the stories never will be, and some will be recorded only in shorter versions.

Sorensen supports and embodies the native American philosophy of balance and harmony. He is also an administrator and a teacher, trained in the psychology of learning. He met Jon Madian last October at the Basic Skills National Conference in Washington, D.C. "Jon Madian is a writer — an artist — and I began working with him because of his project's approach to creative writing, which goes beyond our present efforts in developing basic skills," Sorensen said.

"I went to Rough Rock to introduce a self-expressive use of language, Madian said. "I worked with teachers to help them get in touch with their inner voices and I encouraged the children to compose, draw, write, and imagine. The role of cultural literature in an Indian school is quite different from that of the white middle class. To many teachers, cultural literature is something to be analyzed. To Indians, it is something to be internalized."



Jon Madian, writer-in-residence in the Yucaipa (CA) Unified School District, discusses the key elements of writing. (photo by Kent Thompkins)

There was no word processor in Rough Rock, but Madian was able to incorporate some of the successful teaching techniques he uses in his own project. "When I left, there were drawings, poems, and stories — by the children and the teachers — lining the walls," he said.

In Yucaipa, Madian uses the word processor in the middle school to teach composing. "I use the whole technology of the word processor to help the children do what a writer does — write, think, and rewrite," Madian said. His students have named their machine *HAM*, for "Hot Air Machine," and because they think the machine is a bit of a showoff. With some help from Madian, HAM first introduced itself to the class via letters and has become a pen pal to the students. HAM comments on their writing and composes poems and journal entries as models to encourage the students to write.

They do — and then staff at the school enter students' work on HAM and print it. "This is a tremen-

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dous support for the language experience approach to teaching reading and writing," Madian said. "For instance, you can give students a complete anthology of their work. You can also store a whole year's lesson plans on one disc."

Madian claims that another outstanding quality of the word processor as a curriculum development tool is that lessons are always in a process of refinement by the people who are using them. "For Mark's project, this is particularly valuable, since he needs to develop a language arts curriculum for a very specific culture," Madian said. "The content of that curriculum must emerge from within that community."

Madian has helped design a project for an elementary school where children's names are inserted into basal readers and "local color" is added to geography books by using a word processor. As a writer-in-residence, he helps students create literature that supports teachers' lesson themes. He also works with teachers to help them learn to motivate the composing process in students for creative writing.

Madian's trip to Rough Rock reinforced his affection for and confidence in modern technology. "As a writer, my experience at Rough Rock impressed upon me the role of legends and myths in culture," Madian said. "It is intriguing to hear the age-old stories being passed on today — and now the word processor can take the legends and myths and put them into contemporary print form, which can be used as a basis for reading, writing, geography, and literature lessons in the classroom."

Betty Bitsillie, a teacher's aide at the Rough Rock (AZ) Demonstration School, works on an illustration. (photo by Kent Thompkins)

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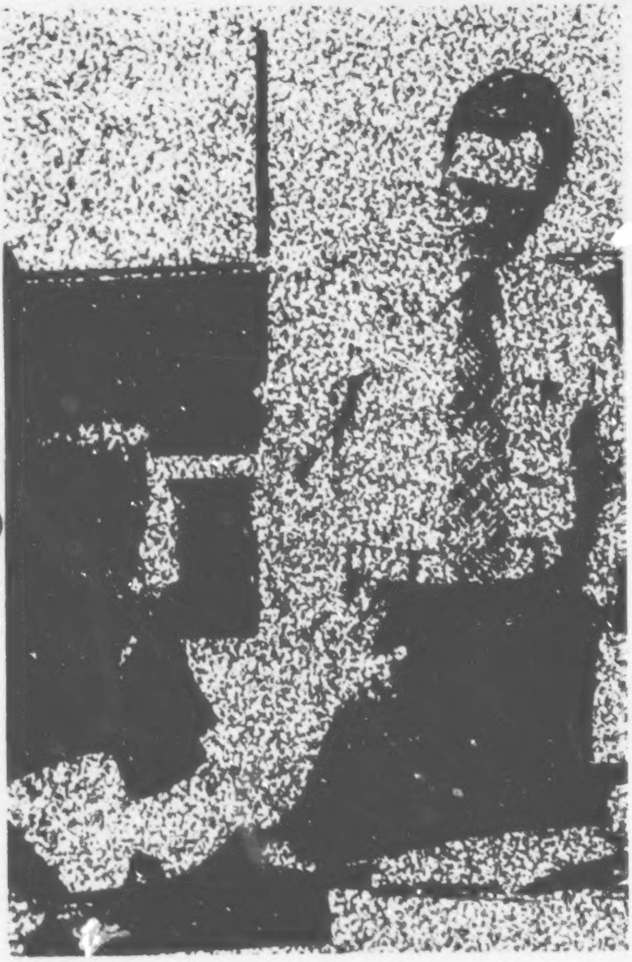
Tutorial Programs for Adults and Out-of-School Youth

by John Fuller and Deanne Wallace



Adult learning flourishes under the volunteer tutorial programs around the country.

"In a dark and dreary cave inhabited with bats and other creatures of the night, a wizard chants words of magic and the ghost of the dead sage appears to instruct the wizard in the knowledge that he seeks..."

Unlike the old wizard who has to stumble about in a dreary cave, society feels that all we mortals need do to find knowledge that we seek is READ. Yet, according to the latest statistics, 35 million Americans are "functionally illiterate." What does "functionally illiterate" mean? We define it as the inability to read or write well enough to cope and survive in our literate society. The individuals who fall into this category may or may not be illiterate, but they are close enough to illiteracy to find that their ability to function in our society is seriously impaired.

Illiteracy is largely an unseen problem in America. Few people will admit they have a reading problem. To do so, they would have to admit that they have missed out on some fundamental learning. Many of these individuals feel inadequate, stupid, or worthless. In fact, masking illiteracy in our society is not an easy task. It takes considerable skill. People who can't read must be able to pick up on visual clues; quickly make deductions based on little information; and rely on memory to keep from inadvertently revealing that they cannot read.

Today the problem of illiteracy is being challenged. Many people are volunteering to help people gain skills they failed to acquire when they were younger. Volunteer tutorial programs provide instruction to people in the basic skills of reading, mathematics, and oral and written communication.

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The People Served

People who attend adult tutorial programs fall into several general categories. Some are high school dropouts. Carey dropped out of school at age 16. He is now 28 years old and wants a better job. What's holding him back? He can't read. He has refused promotions several times before and now management is questioning him. Panic is creeping into Carey's life. Joan, a high school graduate, is a 41-year-old housewife whose children are nearly grown. Joan is bored. She wants some measure of financial independence, but she cannot read or compute mathematics well enough to pass a pre-employment test at a local supermarket to qualify to work as a cashier. She feels defeated and useless.

Nick, 22, is classified as a slow learner. A rehabilitation program seeks services for Nick to help improve his life skills. They might be able to place him in a job at a local hotel if he can learn to tell time and read signs well enough to take a bus to and from work. Alice is in the "over 65" group. She didn't learn to read or write in her youth. Now, at 70, she wants to read her Bible and write postcards to friends. Joe is also a dropout, but he functions at a higher level in reading and mathematics. He is an unemployed unskilled laborer and wants to work as a meter reader. However, the electric company requires that employees hold a high school diploma or its equivalent.

All these individuals share a common problem. Their functional limitations in the basic skills prevent them from full participation in the economic, social, and political life around them.

Problems Unique to Adult Learners

Adults bring a particular set of problems to the learning situation and it is important that tutors be sensitive to these problems. Most of the students work all day and are often tired when they come to class. They are husbands and wives, fathers and mothers, with many family responsibilities that can interfere with their ability to attend all lessons or to concentrate solely on basic skills when they do come to class. It is difficult for many students to find the time or the privacy necessary to work at home. This means that often three hours per week is all they spend on basic skills — that adds up to only twelve hours per month. Compare that to the twenty-five hours per week that the average child spends in a classroom, and it is easy to see why many adult students are easily discouraged by their apparently slow progress.

The Initial Interview and Evaluation

Most programs schedule an initial interview with the person who calls for help. The interview is intended to acquaint the entering student with the program and to help the staff learn more about the person. However, the evaluation and instructional formats in each program vary.

For example, the Florida L.I.F.E. Basic Skills Program in Orlando is built upon skills measured in the Tests of Adult Basic Education (TABE), 1976 Edition. This test is given to all entering students. The TABE provides two key elements for the program: diagnosis and prescription for instruction in reading, mathematics, and language. Prescriptive evaluations of the student's weaknesses and strengths are made and a personalized program is written for each student. Materials are related to the specific skills tested by the TABE. This allows any tutor to locate and request appropriate materials for the students. The test materials were selected based on the experience of and advice from other adult programs throughout the country.

Columbus Basic Skills Unlimited (CBSU) in Ohio, relies on formal and informal evaluation methods. The Wide Range Achievement Test (WRAT) and the Informal Reading Miscue Analysis technique are used to identify performance levels and determine tutorial strategies. CBSU has also developed a life skills assessment instrument. This test surveys performance in such areas as: days of the week, months, telling time, color words, and basic mathematics skills.

At the initial interview, the evaluator determines the areas of need and prime instructional objectives for the student and then recommends techniques and materials that might be used by the tutor.

Approaches to Instruction

At CBSU, checklists are used to teach life skills such as getting a driver's license or filling out a job application. These checklists are used as pre- and post-tests to measure growth. The lists also provide the tutor with a sequence for teaching each objective. A survey is used to measure progress through self-evaluation. This form is given to the students and volunteers after the first eight weeks, and then it is used at six month intervals for as long as the student remains in the program. The survey was developed around the question: "What can you do now that you couldn't do before?" This approach allows for student growth and involves the student and the volunteer tutor in the evaluation process.

Both the Florida and Ohio programs use commercial materials designed for adults, as well as

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Deanne Wallace and John Fuller

local tutor-developed materials appropriate for the location and the students' environment. The use of one-to-one and small groups allows for personalized instruction unmatched in larger classes. These programs appear to emphasize reading but, consumer mathematics, writing, oral communication skills, and reading are combined and practiced by the students through the use of life skills materials and activities.

The Volunteer Tutor

The philosophy of most volunteer tutorial programs is: "If you can read and compute simple mathematics, you can teach someone else to do the same." Peer teaching does not demand previous experience in teaching, nor is any special degree necessary. Peer teaching depends on something much more important: patience and understanding. Peer teaching is not just a volunteer tutor teaching a student — it is one person helping another achieve personal goals and dreams.

Volunteer tutors are recruited from all sectors of the community through various means. Public service announcements on radio and television, articles in local newspapers, and flyers placed in businesses, churches, and service agencies throughout the community are used. Word-of-mouth referrals by tutors, students, and other persons in the community always account for a large percentage of new volunteers.

The prospective tutor often enters the training workshop with doubts about his or her capabilities as a tutor. "Will the student like me?" "I don't have a college degree, can I teach someone something as important as reading?" These are genuine fears and doubts that must be addressed at the first training workshop. A prime goal for most programs is to provide the tutors with enough information and instruction to help them feel self-confident and prepared for the first meetings with their students.

The training offered in each program varies. The Florida program holds two-day workshops for a total of six hours of orientation. At these workshops, the program and its objectives are discussed and the tutors are informed about the use of materials. Considerable emphasis is also placed on the support and communication systems within the program. After tutors begin working with a student, they receive inservice and on-the-job training. The Ohio program conducts a two-day workshop totaling twelve hours of instruction. Orientation to the program, use of materials, instruction, and role-playing activities in various techniques of tutoring are also a part of the CBSU training.

Organizational Structure

We believe that the most effective and realistic tutorial programs use trained volunteers under the guidance and supervision of a small full-time staff. The use of trained volunteers to provide instruction in the program is cost effective, but professional staff are needed to support, to give guidance, and to help maintain rapport between the tutor and student. The staff recruits volunteers and students, develops public relations programs, conducts pre- and inservice training for volunteers, designs curricula, arranges for diagnostic testing, prepares individual programs of instruction or assists with the preparation of lesson plans, and maintains records.

Conclusion

With less money for education, we must rely more and more on volunteers as resources within our programs. This year, the National Center for Citizen Involvement in Boulder, Colorado, has adopted as its theme: "Volunteers, Our Greatest Natural Resource." We must convince state and local agencies, organizations, foundations, and corporations to support this theme by helping to sustain volunteer tutorial programs through their financial assistance. We will be grateful — but, more important, the people in this country who need tutorial services in the basic skills of reading, writing, and mathematics will continue to have the opportunities they need to improve their lives.

John Fuller is the project director of the L.I.F.E. Basic Skills Program in Orlando, Florida. Deanne Wallace is the project director of Columbus Basic Skills Unlimited in Columbus, Ohio.

(photo by Andrea Mohin)

Portia Tyndle, children's librarian in the Washington D.C. Public Libraries, shares a story with children attending Kids' Primetime.

Basic Skills for Breakfast — at McDonald's

Food for thought is on the menu at one McDonald's restaurant in Washington, D.C. Basic skills for youngsters and parent participation are the featured courses in Kids' Primetime, sponsored by the atholic University School of Education's basic skills project, the Washington, D.C. Public Libraries, Reading Is Fundamental (RIF), and the McDonald's Restaurant chain.

Kids' Primetime has two major goals: to provide children with a natural setting where they can prac-

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tice reading and writing skills, and to inform parents about the importance of these skills in their children's lives. Materials are provided so parents can help their youngsters develop literacy skills at home.

Every Wednesday morning, neighborhood preschoolers attend a story hour at the McDonald's located at New York Avenue and First Street,NE. The hour's activities include arts and crafts, creative dramatics, poetry, singing, drawing, and puppetry. Maria Salvadore, director of children's services at the D.C. Public Libraries, and Portia Tyndle, of the Martin Luther King Memorial Library, lead the sessions.

The enthusiastic audience includes children from the Tyler House Day Care Center, several home day care settings, and families who live nearby. "We get a lot of drop-ins, and we do have a number of parents coming with their children," said Irene Blum, project coordinator.

On Wednesday afternoons, the same site is used to give elementary school children practice in using reading and writing skills. Winnell Montague, community librarian at the Sursum Corda Community Library, leads the afternoon sessions, which include story telling, reading aloud, planning and organizing schedules, keeping diaries, and interviewing. Most of the children attend either Holy Redeemer School or Walker Jones Elementary School.

"We have especially encouraged the older children to write stories and work with puppets, and they have developed a number of African folk themes," said Dr. Blum. "We have all learned a lot from the project."

Take-home materials urge parents to schedule regular story-reading sessions at home with their children. Dr. Blum recommends these sessions occur at a fixed time each day in a place where both parent and child can relax and concentrate on the story, and she suggests the child help select the book or story. Other specific activities that foster parent-child interaction are also included in the materials.

In addition to very favorable public response, Kids' Primetime was featured in a story in the January 21, 1982 *Washington Post*. "We received a lot of phone calls after the article appeared," Dr. Blum said. "It makes us all feel very good that our project has sparked similar ideas in other people."

McDonald's and the children's services department of the Washington, D.C. Public Library are going to continue with the program, as well as use of the project's products, after Title II funds run out — and that's the most palatable news of all.

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FOCUS: Some Issues in Parent Involvement

There is general agreement that parent involvement in education is good—good for parents, for teachers, for schools and communities. Clearly, however, the biggest payoff is in children's learning. In the words of Ira Gordon, addressing the Association for Supervision and Curriculum Development shortly before his death in 1978, the basic reason for parent involvement is the belief that it "enables children to achieve better and learn more." There is considerable evidence that this belief is well founded.

Impact

In 1973, Marian Stearns and Susan Peterson conducted a study of parent involvement in compensatory education programs. They distinguished three general roles for parents in such programs: tutor, paid employee, and advisor or decision maker. Stearns and Peterson found clear evidence that involving parents as trainers and tutors can improve children's performance, at least for preschool-age children. For older children, the picture was less clear. At the time of their survey, few programs involved parents as tutors of older children, and the findings from programs that did were inconsistent. The authors speculated that the paucity of research and theory on learning patterns of the older child was partly to blame. This situation has changed little since then. As for the impact of parents' participation in the schooling process in the other two roles, Stearns and Peterson found little direct evidence.

Reviewing evidence from similar programs, Ira Gordon concluded that preschool parent tutor programs have lasting effects on the scholastic performance of children in schools. What about programs for school-age children? In Gordon's view, the data did "*not* add up to solid evidence one way or the other." However, he thought that the data did "point the way toward the design and implementation of methodologically sound programs." That is, programs in which parents tutor children "are generally positive when they are carefully planned, are structured, have an educational focus, and when they include parents working at home with their children." Another finding: "Results do not show up immediately."

The literature on child development emphasizes that children's needs change as children develop. As Erik Erikson explains it, the school-age child learns how he or she fits into the world outside the family. Erikson argues that a child's development can be disrupted at this point if "school life fails to sustain the promises of earlier stages." For early adolescents, the primary concern is "what they appear to be in the eyes of others as compared with what they feel they are." As a result, it seems clear that the kind of support that parents can best provide will change as children get older.

Traditional wisdom holds that school learning climates which promote student achievement result from cultural characteristics and economic resources of communities and schools. Edward McDill, Leo Rigsby, and Edmund Meyers set out to test this wisdom by assessing the importance of community- and school-level characteristics for student achievement. On both levels, only one factor appeared to have a decisive effect—"the extent of involvement and interest by parents in school policies and in their children's academic performance." McDill, Rigsby, and Meyers relate this finding to Benjamin Bloom's position that highly consistent environments have more powerful effects on cognitive development than environments lacking internal consistency. Bloom generalized this position to the relationship between homes and schools: "Where the home and the school are mutually reinforcing environments, the child's educational and social development are likely to take place at higher and higher levels."

Assessment

The literature which shows that parent involvement can have a positive effect on student achievement provides ample evidence that the effects of parent involvement are difficult to assess. First, parent involvement means many things to many people. Second, this goes largely unnoticed. Consultants working with staff of compensatory education programs in which parent involvement was mandated have noticed that there was no debate about definitions. Most people assumed that their definition was shared by most other people. The result: Different people evaluate the same parent involvement effort and reach different conclusions.

Program objectives have a strong bearing on program evaluability. Clearly, the fewer and more finite the objectives, the easier it is to assess their attainment. Stearns and Peterson noted that the effects of parents' participation as paid staff members or as advisors and decision makers are particularly difficult to measure because the changes expected in parent attitudes or in school programs come about slowly and because programs involving parents in such roles often introduce a number of other changes into the classroom at the same time: "Thus, even if the overall program produces measurable

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improvements in child achievement, it is difficult to attribute these improvements to any single component of the program."

In another review of parent involvement programs, James Filipczak, Ann Lordeman, and Robert Friedman noted that the causal linkages between increased involvement and subsequent benefits were "not often clearly stated," while the specific outcomes to be attained were "rarely stated in terms that lend themselves to careful measurement." Since careful evaluation is essential, these authors recommend that future programs follow this process: Clearly state the causal linkages that are assumed to exist. Include a very specific statement of objectives that lend themselves to accurate measurement. Specify the procedures to be used and the characteristics of the parent and student populations being served. If this is done, they concluded, it will become possible not only to answer questions about the general effectiveness of parent involvement programs but also to identify activities and procedures that are effective in achieving particular objectives with particular kinds of learners.

Drawing on federal guidelines, program descriptions, and position papers, Stearns and Peterson hypothesized some "chains" of events linking parent involvement with successful academic performance by children. For programs in which parents tutor children, three chains were proposed. Every chain begins with the same two steps—*Parent learns how to teach his or her own child* and *Parent gives child individual attention and teaches child new skills*—and all three chains end with the same step—*Child performs better on tests.* The three hypothetical chains differ only in the linking steps. Chain A supposes increased student motivation as the intermediate step *(Child sees that parent perceives his or her education as important* and *Child is motivated to succeed in school).* Chain B presumes increased student skills *(Child learns skills better).* Chain C postulates improved parent self-image *(Parent perceives his or her own new competence and communicates confidence and fate control to child;* as a result, *Child feels confident that he or she can perform).*

Reports from two early parent involvement projects show how it helps to think about program objectives in terms of such links. A project in Flint, Michigan, undertook to improve the reading skills of underachieving children. Developers asked parents to show children that they expected them to learn in school by creating a supportive learning environment at home and by making reading materials for classroom use. Comprehension and vocabulary scores of participating children increased. The links of chain A seem to explain these results. A pilot project in Utah to produce reading gains in elementary school children used another approach. All program children were enrolled in a remedial class. Some parents received training, while control group parents did not. Children whose parents received training made significant gains. The links supposed by chain B underlie this program design. Program managers could benefit from examining these hypothetical chains, if only to clarify their own assumptions.

Resources

Nearly every study of parent tutor programs reviewed by Stearns and Peterson concluded that participation was hard to obtain. The many physical and financial demands on poor parents were part of the reason, but for programs for school-age children, the finding "also suggests that teachers are not willing to be involved in programs which use parents as actual instructors in the home. Such a role may threaten both parents and teachers." For this reason, in programs that require teachers and parents to work together for the benefit of child learners, training seems as necessary for teachers as it is for parents. The Home School Institute, Inc., a nonprofit educational service organization, develops programs and publications to promote home-school-community partnerships and offers on-site graduate-level training for teachers in building parent participation in efforts to improve children's basic skills. For more information, contact Dorothy Rich, Director, Home School Institute, c/o Trinity College, Washington, D.C. 20017; 202/466-3633. The Center for the Study of Parent Involvement, a voluntary organization of researchers, teachers, administrators, and parents, disseminates research findings and knowledge gained from practical experience. Five-day workshops equip educators, parent liaison staff, and community organizers with the knowledge and skills to prepare educators for parent involvement. For more information, contact Daniel Safran, Director, Center for the Study of Parent Involvement, 5237 College Avenue, Oakland, California 94618; 415/652-4968. Staff of the Wisconsin R&D Center (Madison) have conducted extensive research on home-school-community relationships. In *Community Relations for Schools* (ED 185 697), B. Dean Bowles and M. Lynn Karges draw on research results to show how schools can develop a model community relations program.

For projects that reach out to parents, the literature on volunteers offers numerous valuable resources. John Alden, former executive director of the National School Volunteer Program, has outlined seventeen steps that can help to structure a successful volunteer program ("Needed: A Broader Definition of Citizen Participation," in Ronald S. Brandt, Ed., *Partners: Parents and Schools.* Alexandria, Virginia: Association for Supervision and Curriculum Development, 1979). Elsewhere, Alden has identified

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what state policy leaders can do to encourage the development of school volunteer programs ("Citizen Participation in Education: School Volunteers Broaden the Definition," *Compact 14* [1], spring 1980, 11-14). State coordinators may find his recommendations of interest. Another useful tool, available from ERIC: *Volunteers in Education: A Handbook for Coordinators of Volunteer Programs* (Philadelphia, Pennsylvania: The Recruitment Leadership and Training Institute, 1975; ED 117 341).

References

Bloom, B. S. "Stability and Change in Human Characteristics: Implications for School Reorganization." *Educational Administration Quarterly*, 2 (1), winter 1966, 35-49.

Della-Piana, G., Stahmann, R. F., and Allen, J. E. *Parent Training and Reading Gains of Elementary School Children*. Salt Lake City: University of Utah, 1967 (ED 011 818).

Erikson, Erik H. *Childhood and Society*. New York: W. W. Norton, 1963.

Filipczak, J., Lordeman, A., and Friedman, R. H. *Parental Involvement in the Schools: Towards What End?* Silver Spring, Maryland: Institute for Behavioral Research, 1977 (ED 143 104).

Flint Public Schools. *School and Home: Focus on Achievement—A Plan to Raise the Achievement Level of Underachieving Elementary Children*. Flint, Michigan: Flint Public Schools, 1963 (ED 002 395).

Gordon, I. J. "The Effects of Parent Involvement in Schooling." In R. S. Brandt, Ed., *Partners: Parents and Schools*. Alexandria, Virginia: Association for Supervision and Curriculum Development, 1979.

McDill, E. L., Rigsby, L. C., and Meyers, E. D., Jr. *Educational Climates of High Schools: Their Effects and Sources*. Baltimore, Maryland: Center for the Study of Social Organization of Schools, Johns Hopkins University, 1969 (ED 030 205).

Stearns, M. S., Peterson, S. M., and others. *Parent Involvement in Compensatory Education Programs*. Menlo Park, California: Educational Policy Research Center, Stanford Research Institute, 1973 (ED 088 588).

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Working with Volunteers

Turnover can be a problem if your program depends on contributions from volunteers. Here are some pointers on reducing volunteer turnover from Carleen O'Connell of Northwest Regional Educational Laboratory:

- Inclusion is vitally important. Consistently convey the message that "we wouldn't be where we are now without you." Offer frequent rewards, both tangible and emotional. Use varied methods: personal messages, special meetings, potluck dinners, media publicity that reaches volunteers' friends. Train staff in ways of showing appreciation for volunteers as well as in ways of keeping volunteers interested in classroom work. Individual contracts help volunteers to know what is expected and reinforce the point that their role is important. Contracts should indicate role relationships, job responsibilities, and duration of the volunteer period.

- Don't skimp on orientation time and materials. Volunteers must know their tasks and responsibilities; where they stand in relation to teachers, other volunteers, and students; and the limits of their own authority. Provide teachers with ongoing information about ways of best utilizing volunteers' abilities and interests in the classroom. Maintain a task list for each volunteer. For new volunteers, create packets describing the overall program and particular roles.

- Give volunteers a voice in determining where the program is going. Include them in ongoing evaluation as well. They have a good perspective on what is going well and what needs improvement.

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IRA Gives Tips on Choosing Books for Children

How do you choose a book for a child? That question is often asked by parents and others who want to buy books as gifts for children. Some answers come from the International Reading Association (800 Barksdale Rd., P.O. Box 8139, Newark, Del. 19711). IRA offers these tips:

- Use a child's interests and hobbies as a guide for choosing books.
- Seek advice from teachers and librarians.
- Take advantage of television and movies. A child would probably enjoy a book upon which a program or movie was based or one with themes or characters similar to those in the show.
- Remember the classics.
- Take advantage of booklists. They are often available through schools or libraries.
- Select books at the appropriate reading level. The best way to decide if a book is appropriate is to leave it up to the child. When choosing a book in the child's absence, it is better to get one that is too easy than one that is too hard.
- Trust your instincts, if you are choosing books for your own child. You know your child better than anyone. Remember which books and subjects your child has enjoyed in the past, and use that as a guide for choosing books now.

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Booklet Lists Fundraising Tips

It's a booklet — the same size as the *Ideabook*, but not as thick. The cover is purple with a touch of orange. You probably received it in the mail about a month ago. The title? *An Almanac of Tutorial Projects: A Collection of Tutorial Projects Involving Basic Skills Instruction*. It was developed by InterAmerica Research Associates, Inc. under a contract with the Basic Skills Office.

If you have misplaced it, the booklet is worth looking for. As advertised, it is a collection of project descriptions. More importantly, the book can be used as a reference tool for starting your search to locate new sources of funding outside the federal government.

To use the booklet for information about funding sources, refer to the section headed "Implementation Requirements." Listed under that heading are sources of funding for projects. Then, find a project that is already successful using a funding source that you would like to explore. Call the project director listed under the heading "Contact" and find our how they went about seeking and securing support from organizations and agencies outside the federal government.

To get you started, we analyzed the types of nonfederal funding sources listed in *An Almanac*. We also called several project directors listed in the booklet to see if they had any general advice to offer to first-time fund raisers.

We found that projects that have been successful in securing outside support rarely rely on just one source of funding; most listed several. Explaining this strategy, a director of an adult literacy project said, "Priorities of the federal government, and to some extent foundations and corporations, are continually shifting. So if you accept massive support from one source and then that source dries up, you may be worse off than before because you will have shattered the hopes of many people who had come to depend on you for help."

Second, as expected, we found that foundations and corporations were popular sources of support. However, the successful projects did more than solicit funds from these established giving programs. In fact, the source of funding listed most frequently in *An Almanac* was private donors — money contributed by individuals or local businesses to support a project. Projects also reported that they relied heavily on special events such as fundraisers to supplement funds from other sources.

When asked how to succeed in securing nonfederal sources of support, project directors were cautious in saying that while there were no surefire methods, persistance and organization usually did pay off. Here are a few of the tips seasoned project people offer to first-time fund raisers.

- If you plan to seek foundation funding, consider incorporating your project as a nonprofit organization.
- Be able to show that your project is well-organized and tightly managed and that you accept the responsibility for making the most of the money you receive.
- Develop roots in your community. Be able to name names, businesses, and agencies that support the work of your project.
- Keep good records of your contributors. Also, ask present contributors to help you find new ones.
- Use your board to help you organize your fundraising campaign.

Other Fundraising Resources

- *The Grantsmanship Center News* is a magazine published every other month by The Grantsmanship Center, a nonprofit educational institution with offices in Los Angeles and New York. It includes timely information on funding sources along with articles about programs and agencies that have been successful in getting foundation or corporate support. A year's subscription is $20. Write to The Grantsmanship Center, 1031 S. Grand Avenue, Los Angeles, CA 90015.
- For a listing of some 1400 corporations that have made contributions to educational institutions, see the report *Voluntary Support of Education, 1979-80*. The report is published by the Council for Financial Aid to Education, 680 Fifth Avenue, New York, New York 10019, and costs $14.
- Five-day fundraising training workshops, sponsored by The Grantsmanship Center, take place year-round in selected cities throughout the country. Each workshop includes developing a plan for fundraising, designing fundraising strategies, and reviewing legal regulations

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related to fundraising. The workshop registration fee is $315. For a list of dates and cities, write to The Grantsmanship Center, 1031 S. Grand Avenue, Los Angeles, CA 90015.

- *Corporate 500: The Directory of Corporate Philanthrophy* is 886 pages of information about what major corporations are interested in supporting and who is eligible to apply for support. Published by Gale Research Company, Book Tower, Detroit, MI 48226, the paperback version sells for $125.

Conference Beat:

Eugene Mulcahy on Private Funding

Eugene Mulcahy of the Hartford (CT) Public Schools offered sound advice regarding seeking private funding in his session, "Surviving the Deluge: Life after the Demise of Basic Skills Monies," at the 1981 Basic Skills National Conference.

Mulcahy said he approaches corporations with this bittersweet opening line: "The President sent me." Directories of corporations are available at libraries, but Mulcahy recommended visiting the "corporate responsibility" offices of firms located in your area. He said contacts in the companies are helpful and can be important allies.

"Make sure you take in excellent materials," Mulcahy said. "Be pragmatic, be practical, and above all, do not use jargon. And do keep providing them with information after your appointment."

Libraries also house directories of foundations, and there is a foundation newspaper that details who is giving what kind of money to whom. Mulcahy also recommended seeking private funding from individuals.

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State Coordination: Making It Happen

Coordination of basic skills is a key requirement under Title II. How is it to be accomplished?

The Maryland State Department of Education asked Jane M. E. Roberts of Research for Better Schools, Inc. to identify constraints on coordination and steps that can be taken to encourage it.

Roberts identified three factors that affect coordination: resources, motivation, and leadership.

Resources: Coordination places heavy demands on staff time and expertise. "If allocation of funds has resulted in emphasis on products, facilities, and equipment rather than on people, coordination will be extremely difficult." She suggests two strategies: Either reallocate funds to hire new staff with special competence in coordination tasks, or reconsider priorities. The second strategy, Roberts said, could result in reassignment of staff or tasks. Another option: A group relatively low in resources could negotiate its contribution to the coordination effort to lessen demands on staff time or expertise. In any case staff assigned to the coordination effort should be highly energetic and have strong negotiating and problem-solving skills.

Motivation: All individuals and groups involved in coordination must be motivated by a common goal. However, as long as this goal is shared, no group must give up its own objectives.

Leadership: Strong leadership by one group can encourage coordination, Roberts said. Shared leadership, in which each group retains some power, can also work. Roberts identified two appropriate strategies: In the first case, allow the most powerful organization to assume leadership, while encouraging participatory decision making and equal distribution of work and rewards. In the second case, negotiate operating procedures that ensure equal power and shared leadership.

Other tips from Roberts:

- Encourage commitment by enabling staff to experience an initial success; give voice to advocates in the organization who support the effort; work at achieving a positive image; reward individuals involved in the effort.
- In planning, include a clear statement of intent; anticipate barriers; establish mutually acceptable ground rules; identify common group interests; agree on goals.
- Encourage each level of leadership to provide training or technical assistance to those lower in the hierarchy.
- Introduce coordination gradually, one program or element at a time.
- Encourage the sharing of information among supervisors and subordinates and among peers.

Roberts's paper, "Coordination for the Improvement of Basic Skills," can be obtained through the Regional Technical Assistance Centers.

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lished by CEMREL, Inc. (3120 59th
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Education, Washington, D.C.

RESOURCES

Contacts

Reducing Functional Illiteracy: A National Guide to Facilities and Services is a 148-page directory of names, addresses, and telephone numbers of over 2,600 literacy programs in the United States and Canada. The *Guide* was compiled by the AAAA Contact Center, a non-profit organization sponsored by the American Association of Advertising Agencies that serves as a clearinghouse for people and groups concerned about functional literacy. *The Guide* lists programs by state and by city. Included too, are the latest statistics on functional literacy, a two-page list of national organizations concerned with literacy, and detailed information about the work being done by the National Affiliation for Literacy Advance, the International Reading Association, and Literacy Volunteers of America.

Order from: AAAA Contact Center, P.O. Box 81826, Lincoln, NE 68501; $12.00 postpaid.

Trends in Adult Literacy Education

What forces are likely to shape literacy education for the rest of the decade? In what ways will literacy programs change in response to societal changes? *Outlook for the 80's: Adult Literacy* examines these questions. Produced by Dingle Associates under a contract with the Basic Skills Improvement Program, *Outlook* is a collection of four concept papers written by representatives of organizations concerned with adult literacy. One paper reviews the state of the art since 1960. Another paper deals with critical issues in adult literacy and community-based organizations. A third addresses the issue of what constitutes a successful adult program, while a fourth paper is concerned with preparation of instructors.

Available from CEMREL Inc., Attention Sheila Walker, 3120 59th Street, St. Louis, MO 63139; no charge.

Improving Spelling Teaching

The Technical Assistance Center at the Northwest Regional Educational Laboratory in Portland has prepared a paper for Title II projects that synthesizes the research on teaching spelling. The paper, *Effective Practices in Spelling Instruction* by Kathleen Cotton, begins by examining the research on instructional methods in spelling and then summarizes effective and ineffective teaching practices. Listed among the teaching practices not supported by research are writing words in the air, writing words over and over, and emphasizing "hard spots" in words. Effective practices include presenting spelling words to be learned as a list and teaching spelling rules only if they apply to large numbers of words. According to the paper, the single most important factor in learning to spell is to have students correct their own misspellings.

Available from Northwest Regional Educational Laboratory; Attention: Jack Allen; 300 S.W. Sixth Avenue; Portland, OR 97204; no charge.

Recognizing Volunteers

National Volunteer Week is April 18-24. The *Volunteer Recognition Kit,* published by the National Center for Citizen Involvement, a national resource organization for strengthening citizen involvement, has some new ideas for recognizing the contributions made by volunteers to many basic skills projects. The kit includes more than 80 pages of tips, models, and strategies for successful volunteer recognition activities along with a dozen camera-ready sheets featuring the 1982 theme *"Volunteers: Our Greatest Natural Resource."* The sheets can be used to prepare your own ads, flyers, buttons, and balloons.

Order from Volunteer Readership, P.O. Box 1807, Boulder, CO 80306; $9.95 plus $2.50 for shipping and handling. Prepaid orders only.

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SELECTED BASIC SKILLS IMPROVEMENT PROGRAMS

SELECTED BASIC SKILLS IMPROVEMENT PROGRAMS

The references that follow represent two catagories:

- resources that describe selected basic skills improvement programs, and
- resources that can be used in planning and operating basic skills improvement programs.

NOTE: Each reference includes--within parentheses--additional information to aid one in obtaining resources or program materials.

Resources Describing Selected Basic Skills Improvement Programs

Ali, Y.B., Hundley, D.H., & Taylor T.C. Promising practices - In pre-elementary Right-to-Read programs (Packet containing 5 publications: The Guide, Manual I - Development of Pre-Reading Skills (A Theoretical Perspective), Manual II - Ideas for Parents in Pre-Elementary Right-to-Read Programs, Manual III - Promising Practices for Teachers in Pre-Elementary Right-to-Read Programs, Manual IV - Promising Practices for Administrators in Pre-Elementary Right-to-Read Programs). Washington, D.C.: Children (1st) First, Inc./U.S. Department of Education, Office of Right-to-Read/Basic Skills, 1980. (Children (1st) First, Inc., 525 School Street, S.W., Suite 303, Washington, D.C. 20024)

Baker, T., et al. Title I/teacher corps/title II: Basic skills improvement: A joint effort to improve basic skills instruction. Atlanta, GA: Atlanta Teacher Corps Consortium, n.d. (Dr. Mae Armster Christian, Director, Atlanta Teacher Corps Consortium, 2930 Forrest Hill Drive, S.W., Atlanta, GA 30315)

CEMREL, Inc. NEWS from the basic skills national technical assistance consortium (Series of newsletters published under contract with the Basic Skills Improvement Program, U.S. Department of Education, December 1980 to May 1982). St. Louis, MO: CEMREL, Inc., 1980-82. (CEMREL, Inc., 3120 59th Street, St. Louis, MO 63139)

Christensen, R., Nicolai, S., Hunzeker, D., Salinas, C., & Pearson, B. Reducing functional illiteracy--A national guide to facilities and services. Lincoln, NE: AAAA Contact Center, August 1982. (AAAA Contact Center, P.O. Box 81826, Lincoln, NE 68501, (402) 464-0602)

Cruz, N., Jr., Holland, N.J., & Garlington, M. A catalog of parent involvement projects--A collection of quality parent projects for assisting children in the achievement of basic skills. Rosslyn, VA: InterAmerica Research Associates, Inc./U.S. Department of Education, Basic Skills Improvement Program, 1981. (InterAmerica Research Associates, Inc., 1555 Wilson Boulevard, Rosslyn, VA 22209)

Cruz, N., Jr., Holland, N.J., & Garlington, M. An almanac of tutorial projects: A collection of tutorial projects involving basic skills instruction. Rosslyn, VA: InterAmerica Research Associates, Inc./ U.S. Department of Education, Basic Skills Improvement Program, 1981. (InterAmerica Research Associates, Inc., 1555 Wilson Boulevard, Rosslyn, VA 22209)

Dougherty, B., & Novak, J. (Eds.). Improving basic skills: Volume I-- A collection of Wisconsin programs for improving the basic skills of undereducated youth and adults. Madison, WI: Vocational Studies Center, University of Wisconsin-Madison, 1982. (Contact Barbara Dougherty or Jan Novak, Vocational Studies Center, University of Wisconsin-Madison, 964 Educational Sciences Building, 1025 West Johnson Street, Madison, WI 53706, (608) 263-3679 or (608) 263-2806)

Dougherty, B., & Novak, J. (Eds.). Improving basic skills: Volume II-- A collection of national programs and resources for improving the basic skills of undereducated youth and adults. Madison, WI: Vocational Studies Center, University of Wisconsin-Madison, 1982. (Contact Barbara Dougherty or Jan Novak, Vocational Studies Center, University of Wisconsin-Madison, 964 Educational Sciences Building, 1025 West Johnson Street, Madison, WI 53706, (608) 263-3679 or (608) 263-2806)

Dougherty, B., & Novak, J. (Eds.). Improving basic skills: Volume III-- A collection of programs and resources selected for the governor's conference on basic skills, December, 1981. Madison, WI: Vocational Studies Center, University of Wisconsin-Madison, 1982. (Contact Barbara Dougherty or Jan Novak, Vocational Studies Center, University of Wisconsin-Madison, 964 Educational Sciences Building, 1025 West Johnson Street, Madison, WI 53706, (608) 263-3679 or (608) 263-2806)

Hundley, D.H., Taylor, T.C., Wicks, B.L., & Berger, E. Success through coordination. A hands-on guide to the coordination of basic skills efforts. Washington, D.C.: Children (1st) First, Inc./U.S. Department of Education, Basic Skills Improvement Program, 1981. (Children (1st) First, Inc., 525 School Street, S.W., Washington, D.C. 20024)

International Business Services, Inc. *Right to read promising practices: 1980*. Washington, D.C.: U.S. Department of Education, Basic Skills Improvement Program, 1980. (Department of Health, Education, and Welfare, Office of Education, Washington, D.C. 20202)

Lipkin, J., & Smith, B. *Abstracts of basic skills improvement projects (Education amendments act of 1978 P.L. 95-561)*. Washington, D.C.: U.S. Department of Education, Office of Elementary and Secondary Education, Basic Skills Improvement Program, 1980.

Moore, A.B. *Literacy: Meeting the challenge. Relating literacy development to career development*. Washington, D.C.: U.S. Department of Health, Education, and Welfare, Office of Education, 1980.

National Diffusion Network Division, U.S. Department of Education. *Educational programs that work* (8th ed.). San Francisco, CA: Far West Laboratory for Educational Research and Development, 1981. (Copies can be purchased for $4.50 from: Order Department, Far West Laboratory for Educational Research and Development, 1855 Folsom St., San Franscisco, CA 94103)

Park, J.S. *Winners, all! 50 outstanding education projects that help disadvantaged children*. Washington, D.C.: U.S. Department of Health, Education, and Welfare, Office of Education, 1980. (For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402, Stock No. 017-080-02079-3)

Zinner, J. *Exemplary programs for adults--A resource of exemplary adult education programs selected by the DNAE advisory panel* (3rd ed.). Burlingame, CA: ACSA, Foundation for Educational Administration, 1982. (Foundation for Educational Administration, 1575 Old Bayshore Highway, Burlingame, CA 94010)

Resources for Use in Planning and Operating Basic Skills Improvement Programs

Ali, Y.B., Hundley, D.H., & Taylor, T.C. *Promising practices - In pre-elementary Right-to-Read programs* (Packet containing 5 publications: *The Guide*, *Manual I - Development of Pre-Reading Skills (A Theoretical Perspective)*, *Manual II - Ideas for Parents in Pre-Elementary Right-to-Read Programs*, *Manual III - Promising Practices for Teachers in Pre-Elementary Right-to-Read Programs*, *Manual IV - Promising Practices for Administrators in Pre-Elementary Right-to-Read Programs*). Washington, D.C.: Children (1st) First, Inc.,/U.S. Department of Education, Office of Right-to-Read/Basic Skills, 1980. (Children (1st) First, Inc., 525 School Street, S.W., Suite 303, Washington, D.C. 20024)

Baker, R.D., & Gray, B.B. *Monterey reading program--Teacher's manual*. Palo Alto, CA: Monterey Learning Systems, 1977. (Monterey Learning Systems, 900 Welch Road, Palo Alto, CA 94304)

Basic Skills National Technical Assistance Consortium. Catalog of state basic skills products. St. Louis, MO: CEMREL, Inc., U.S. Department of Education, Basic Skills Improvement Program, 1982. (Basic Skills National Technical Assistance Consortium, CEMREL, Inc., 3120 59th Street, St. Louis, MO 63139)

Brown, D.A. (Ed.). Handbook for organizing and managing literacy programs for adults. Washington, D.C.: U.S. Government Printing Office, 1979. (For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402 - Stock Number 017-080-01917-5)

Calkins, B., Hesser, F., Schiffman, G., & Staiger, R. (Eds.). Projections for reading: Preschool through adulthood. Washington, D.C.: U.S. Department of Health, Education, and Welfare, Office of Education, n.d. (For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402--HEW Publication No. OE 77-00110, Stock No. 017-080-01797-1)

Catholic University of America, Basic Skills Parent Project. Basic skills parent project: Final report. Washington, D.C.: The Catholic University of America, Basic Skills Parent Project, 1982. (The Catholic University of America, School of Education, Washington, D.C. 20064, (202) 635-5800)

Catholic University of America, Basic Skills Parent Project. The basics begin at home. Washington, D.C.: The Catholic University of America, 1981. (The Catholic University of America, School of Education, Washington, D.C. 20064, (202) 635-5800)

CEMREL, Inc. NEWS from the basic skills national technical assistance consortium (Series of newsletters published under contract with the Basic Skills Improvement Program, U.S. Department of Education, December 1980 to May 1982). St. Louis, MO: CEMREL, Inc., 1980-82. (CEMREL, Inc., 3120 59th Street, St. Louis, MO 63139)

Crowe, M.R., & Harvey, R.J. Learning and retention of basic skills through work--Preliminary investigation of the learning and retention of selected reading and mathematical concepts resulting from student enrollment in a traditional learning environment and in a learning-in-work environment. Columbus, OH: The National Center for Research in Vocational Education, Ohio State University, 1980. (The National Center for Research in Vocational Education, Ohio State University, 1960 Kenny Road, Columbus, OH 43210)

Dougherty, B., & Novak, J. (Eds.). Basic skills improvement: A handbook for reading, math, writing, and oral communication. Madison, WI: Vocational Studies Center, University of Wisconsin-Madison, 1983. (Contact Barbara Dougherty or Jan Novak, Vocational Studies Center, University of Wisconsin-Madison, 964 Educational Sciences Building, 1025 West Johnson Street, Madison, WI 53706, (608) 263-3679 or (608) 263-2806)

Eberhart, N.A., & Trent, M.L. *The assessment of print materials--Individualized inservice packet number I (Teaching Teen Reading Series)*. Columbus, OH: Ohio Department of Education, Division of Inservice Education, n.d. (The Ohio Department of Education, Division of Inservice Education, 65 South Front Street, Columbus, OH 43215, (614) 466-2979)

Eberhart, N.A., & Trent, M.L. *The assessment of student groups--Individualized inservice packet number II (Teaching Teen Reading Series)*. Columbus, OH: Ohio Department of Education, Division of Inservice Education, n.d. (The Ohio Department of Education, Division of Inservice Education, 65 South Front Street, Columbus, OH 43215, (614) 466-2979)

Eberhart, N.A., & Trent, M.L. *Individualization in the content areas--Individualized inservice packet number VIII (Teaching Teen Reading Series)*. Columbus, OH: Ohio Department of Education, Division of Inservice Education, n.d. (The Ohio Department of Education, Division of Inservice Education, 65 South Front Street, Columbus, OH 43215, (614) 466-2979)

Eberhart, N.A., & Trent, M.L. *Interpretive comprehension in the content areas--Individualized inservice packet number IV (Teaching Teen Reading Series)*. Columbus, OH: Ohio Department of Education, Division of Inservice Education, n.d. (The Ohio Department of Education, Division of Inservice Education, 65 South Front Street, Columbus, OH 43215 (614) 466-2979)

Eberhart, N.A., & Trent, M.L. *Literal comprehension in the content areas--Individualized inservice packet number III (Teaching Teen Reading Series)*. Columbus, OH: Ohio Department of Education, Division of Inservice Education, n.d. (The Ohio Department of Education, Division of Inservice Education, 65 South Front Street, Columbus, OH 43215 (614) 466-2979)

Eberhart, N.A., & Trent, M.L. *The sequence of the reading lesson--Individualized inservice packet number VII (Teaching Teen Reading Series)*. Columbus, OH: Ohio Department of Education, Division of Inservice Education, n.d. (The Ohio Department of Education, Division of Inservice Education, 65 South Front Street, Columbus, OH 43215 (614) 466-2979)

Eberhart, N.A., & Trent, M.L. *The uses of reading and study skills--Individualized inservice packet number IX (Teaching Teen Reading Series)*. Columbus, OH: Ohio Department of Education, Division of Inservice Education, n.d. (The Ohio Department of Education, Division of Inservice Education, 65 South Front Street, Columbus, OH 43215, (614) 466-2979)

Eberhart, N.A., & Trent, M.L. *Vocabulary development in content areas through word meaning--Individualized inservice packet number VI (Teaching Teen Reading Series)*. Columbus, OH: Ohio Department of Education, Division of Inservice Education, n.d. (The Ohio Department of Education, Division of Inservice Education, 65 South Front Street, Columbus, OH 43215, (614) 466-2979)

Eberhart, N.A., & Trent, M.L. *Vocabulary development in the content areas through work recognition skills--Individualized inservice packet number V (Teaching Teen Reading Series)*. Columbus, OH: Ohio Department of Education, Division of Inservice Education, n.d. (The Ohio Department of Education, Division of Inservice Education, 65 South Front Street, Columbus, OH 43215, (614) 466-2979)

Franklin County Department of Education, Basic Skills Improvement Program. *Basic skills teacher manual*. Columbus, OH: The Franklin County Department of Education, 1982. (The Franklin County Department of Education, 80 East Fulton Street, Columbus, Ohio 43215)

Franklin County Department of Education. *Concept-centered basic skills activities handbook*. Columbus, OH: Franklin County Department of Education, 1982. (Franklin County Department of Education, 80 East Fulton Street, Columbus, OH 43215)

Gavzy, R., Weiland, L., & Abramson Lazarus, G. *A replication manual for trainers--Involving parents of young children in basic skills education*. West Orange, NJ: Educational Improvement Center-Northeast, n.d. (Educational Improvement Center-Northeast, Two Babcock Place, West Orange, NJ 07052, (201) 731-8400)

Gray, B.B., & McClain, L. *Monterey arithmetic program--Teacher's manual*. Palo Alto, CA: Monterey Learning Systems, 1977. (Monterey Learning Systems, 900 Welch Road, Palo Alto, CA 94304)

Hoffman, L. *A new look at an old skill--Reading in the vocational classroom*. Columbus, OH: Vocational Instructional Materials Laboratory, The Ohio State University, 1982. (Vocational Instructional Materials Laboratory, The Ohio State University, 1885 Neil Avenue, Room 112, Columbus, OH 43210, (614) 622-5001)

Hundley, D.H., Taylor, T.C., Wicks, B.L., & Berger, E. *Success through coordination. A hands-on guide to the coordination of basic skills efforts*. Washington, D.C.: Children (1st) First, Inc./U.S. Department of Education, Basic Skills Improvement Program, 1981. (Children (1st) First, Inc., 525 School Street, S.W., Washington, D.C. 20024)

Koller, W.D., & Schwartz, D. *Help your child become a better achiever--A competency skills program*. New York, NY: Cal Industries, Inc., 1980. (Cal Industries, Inc., 76 Madison Avenue, New York, NY 10016)

Kunkle, V.L., & Eberhart, N.A. *Teaching early reading*. Columbus, OH: Ohio Department of Education, Division of Inservice Education, 1976. (The Ohio Department of Education, Division of Inservice Education, 65 South Front Street, Columbus, OH 43215, (614) 466-2979)

Long, T.E. *Basic mathematics skills and vocational education*. Columbus, OH: National Center for Research in Vocational Education, Ohio State University, 1980. (National Center for Research in Vocational Education, The Ohio State University, 1960 Kenny Road, Columbus, OH 43210)

The Massachusetts Dissemination Project (Ed.). Teaching speaking and listening skills in the elementary and secondary school. Quincy, MA: The Massachusetts Dissemination Project, n.d. (Massachusetts Dissemination Project, Massachusetts Department of Education, 1385 Hancock Street, Quincy, MA 02169)

Mercier, L.Y. (Ed.). The essentials approach: Rethinking the curriculum for the 80's. Washington, D.C.: Dingle Associates, Inc./U.S. Department of Education, Basic Skills Improvement Program, 1981. (Dingle Associates, Inc., 1625 Eye Street, NW, Suite 915, Washington, D.C. 20006)

Mercier, L.Y. (Ed.). Outlook for the 80's: Adult Literacy. Washington, D.C.: U.S. Department of Education, Basic Skills Improvement Program, 1981.

Montez, A.R. (Ed.). Adult literacy program: A compilation of reading academy program experiences. Washington, D.C.: U.S. Department of Health, Education, and Welfare, n.d. (For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402, Stock Number 017-080-01917-5)

Moore, A.B. Literacy: Meeting the challenge. Relating literacy development to career development. Washington, D.C.: U.S. Department of Health, Education, and Welfare, Office of Education, 1980.

Moore, B.J. Improving basic skills instruction in secondary schools: A handbook for parents. San Marcos, TX: Southwest Texas State University, The Southwest Texas Program for Improving Basic Skills Instruction in the Secondary Schools, 1982. (The Southwest Texas Program for Improving Basic Skills Instruction in the Secondary Schools, Southwest Texas State University, San Marcos, TX 78666)

Ohio Department of Education (Columbus), Division of Inservice Education. Problem solving...a basic mathematics goal. A resource for problem solving. Columbus, OH: Ohio Department of Education, Division of Inservice Education, 1980. (The Ohio Department of Education, Division of Inservice Education, 65 South Front Street, Columbus, OH 43215, (614) 466-2979)

Ohio Department of Education (Columbus), Division of Inservice Education. Problem solving...a basic mathematics goal. Becoming a better problem solver. Columbus, OH: Ohio Department of Education (Columbus), Division of Inservice Education, 1980. (The Ohio Department of Education, Division of Inservice Education, 65 South Front Street, Columbus, OH 43215, (614) 466-2979)

Ohio Department of Education (Columbus), Division of Inservice Education. Write on: Teaching written communication. Columbus, OH: Ohio Department of Education (Columbus), Division of Inservice Education, 1980. (The Ohio Department of Education, Division of Inservice Education, 65 South Front Street, Columbus, OH 43215, (614) 466-2979)

Olsen, L. Lost in the shuffle. A report on the guidance system in California secondary schools. Santa Barbara, CA: Open Road Issues Research, Citizen's Policy Center, 1979. (Open Road, Citizen's Policy Center, 1216 State St., Suite 310, Santa Barbara, CA 93101, (805) 963-3850)

Reed, L., & Ward, S. (Eds.). 1 - Basic skills issues and choices. Issues in basic skills planning and instruction. St. Louis, MO: CEMREL, Inc./U.S. Department of Education, Basic Skills Improvement Program, 1982. (CEMREL, Inc., 3120 59th Street, St. Louis, MO 63139)

Reed, L., & Ward, S. (Eds.). 2 - Basic skills issues and choices. Approaches to basic skills instruction. St. Louis, MO: CEMREL, Inc./U.S. Department of Education, Basic Skills Improvement Program, 1982. (CEMREL, Inc., 3120 59th Street, St. Louis, MO 63139)

School District of Philadelphia, Parent Participation for Basic Skills Improvement Project. Activities for parent involvement. Philadelphia, PA: Parent Participation for Basic Skills Improvement Project, School District of Philadelphia/U.S. Department of Education, Basic Skills Improvement Program, n.d. (Parent Participation for Basic Skills Improvement Project, School District of Philadelphia, Administration Building, Room 118, 21st Street at the Parkway, Philadelphia, PA 19103)

Shuler, L.Z. Curriculum guide for adults: A resource manual for instructors of adult basic skills. Tazewell, TN: Hancock County Schools, 1981. (Hancock County Schools, Post Office Box 279, Tazewell, TN 37879)

Speech Communication Association. Resources for assessment in communication. Annandale, VA: Speech Communication Association, 1980. (Speech Communication Association, 5105 Backlick Road, Suite E, Annandale, VA 22003)

Thornton, L.J. Basic reading skills and vocational education. Columbus, OH: National Center for Research in Vocational Education, 1980. (National Center for Research in Vocational Education, The Ohio State University, 1960 Kenny Road, Columbus, OH 43210)

Thornton, L.J., Holmboe, B., & Lee, Ta-Wei. Clustered construction trades reading strategies (1981 Vocational Reading Series). University Park, PA: Division of Occupational and Vocational Studies, Pennsylvania State University/Bureau of Vocational Education, Pennsylvania Department of Education, 1981. (Reading Intervention Strategies Project, 119 Rackley Building, The Pennsylvania State University, University Park, PA 16802)

U.S. Department of Education, Bureau of Elementary and Secondary Education, Division of Education for the Disadvantaged. Title I, ESEA--Working with schools: A parents' handbook. Washington, D.C.: U.S. Department of Education, 1980. (For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402, ED Publication No. 79-07109)

U.S. Department of Health, Education and Welfare, Office of Education, Basic Skills Improvement Program. Standards: A way of measuring success--What do we know about standards for effective basic skills programs? Washington, D.C.: U.S. Department of Health, Education and Welfare, Office of Education, 1979.

U.S. Department of Health, Education, and Welfare, Office of Education. Tutor trainers--Resource handbook. Washington, D.C.: U.S. Department of Health, Education, and Welfare, n.d. (For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402, Price $1.90, Stock Number 1780-01334, DHEW Publication No. OE 74-00102)

Veltman, C.J. Contractor report--Relative educational attainments of minority language children, 1976: A comparison to black and white English language children. Washington, D.C.: National Center for Education Statistics/U.S. Department of Education, 1980. (For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402)

Visco, T., Fulcher, H., Phillips, M., & Grosso, A. Adult academy quality programs and practices. Phoenix, AZ: Phoenix Union High School District, 1982. (Phoenix Union High School District, 2526 West Osborn Road, Phoenix, AZ 85017)

VOLUNTEER: The National Center for Citizen Involvement. The 1982 volunteer recognition kit. Boulder, CO: VOLUNTEER: The National Center for Citizen Involvement, 1982. (VOLUNTEER: The National Center for Citizen Involvement, Post Office Box 4179, Boulder, CO 80306 or 111 North 19th Street, Suite 500, Arlington, VA 22209)

Wallace, D.G. (Ed.). Developing basic skills programs in secondary schools. Alexandria, VA: Association for Supervision and Curriculum Development/U.S. Department of Education, Basic Skills Improvement Program, n.d. (Association for Supervision and Curriculum Development, 225 N. Washington Street, Alexandria, VA 22314)